January-December 1950

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Date	Caption	Dept.	Photographer	Number
1-3	Effect of $CH_3OH-CCl_4$ Concentration on Monomer and Polymer Bands. Na vs. Area $(OH)_x$.	Sancier	P. Simack	1-1-0
1-3	Heat of Vaporization of CH_3OH in CCl_4 10^oC. Na vs. H_a (kcal./mole).	Sancier	P. Simack	1-2-0
1-3	Detail of Construction on King.	Maust	J. F. Garfield	1-3-0 thru 1-6-0
1-3	Pump room for waste active water. (Printing - Grade 3 paper tilt one box (Gross). Base 1 min. at F 22 plus $2\frac{1}{2}$ min. dodge ~~centor~~ center portion in. On base exposure dodge out right side).	(Nuc. Mom.) HPhysics	Garfield & Walton	1-7-0
1-4	Counting devices for detecting radioactivity.	B.Pollock	R. J. Walton	1-8-0 thru 1-12-0
1-5	Dr. Bigeleisen working at mass spectrometer.	Chemistry	R. J. Walton	1-13-0
1-5	Control panel for mass spectrometer.	Chemistry	R. J. Walton	1-14-0
1-6	Figure 7.3. Cross Section of Cyclotron Installation hsowing Shielding.	Chiuchiolo	P. Simack	1-15-0
1-9	Corn mutation (single ear).	Singleton	R. F. Smith	1-16-0
1-9	Corn mutations (group of two).	Singleton	R. F. Smith	1-17-0
1-9	Corn mutations (group of four).	Singleton	R. F. Smith	1-18-0
1-9	Corn mutations (group of seven).	Singleton	R. F. Smith	1-19-0
1-9	mM (Lplus) Na Glutamate, Glutamine or NH_4 plus in 10 cc. of medium vs. Mg bacterial nitrogen from 10 cc. of medium.	R.M. Drew	P. Simack	1-20-0
1-6	Weather vane (directional),	Mazzarella	R. J. Walton	1-21-0

Date	Caption	Dept.	Photographer	Number
1-9	Photomacrograph of corn kernels showing mutations brought about by radiation.	Singleton	R. F. Smith	1-22-0
1-9	Photomacrograph. Mutations in seeds from pollen of plants in the Co^{60} field, where growing plants were subjected to continuous gamma rays. Changes for one of the color genes, r, include entire kernel (one on left), and only partial kernels (four on right). Kernel on extreme right has a fractional mutation for sugar as well as for color.	Singleton	R. F. Smith	1-2
	per individual.	Bowan	P. Simack	1-33-0
1-10	θ in minutes vs. Intensity.	Hughes	P. Simack	1-34-0
1-10	θ in minutes vs. Intensity.	Hughes	P. Simack	1-35-0
1-10	Current milliamperes vs. Intensity. (θ equals 8').	Hughes	P. Simack	1-36-0
1-10	Current milliamperes vs. Intensity. (θ equaLs 19').	Hughes	P. Simack	1-37-0
1-10	k_1 (integrated). Average % deviation from the average $k_{diss.}$ plotted as a function og the assumed k_1 when 8 is used as the value of the parameter $10^8 a_i$ in the calculations vs. Average % of deviation from the avergae $k_{diss.}$.	Freed	P. Simack	1-38-0
1-10	k_1 (integrated area) Average % deviation from the average $k_{diss.}$ plotted as a function of the assumed k_1 vs. Average % deviation from the average $k_{diss.}$.	Freed	P. Simack	1-39-0
1-10	Figure 1. Schematic drawing of Photometer and Cell.	Freed	P. Simack	1-40-0

Date	Caption	Dept.	Photographer	Number
1-10	Scale (0-180) vs. -Log I/I_o. Graph (Lines 1, 2, 3).	Freed	P. Simack	1-41-0
1-10	Graph (Lines 1, 2). Scale (0-180) vs. -Log I/I_o.	Freed	P. Simack	1-42-0
1-10	Graph (Lines1, 2, 3). Saale (0-180) vs. -Log I/I_o.	Freed	P. Simack	1-43-0
1-10	Graph (Lines 1, 3). Scale (0-180) vs. -Log I/I_o.	Freed	P. Simack	1-44-0
1-10	Graph (Lines 1, 2, 3). Scalee (0-180) vs. -Log I/I_o.	Freed	P. Simack	1-45-0
1-10	Grpah (Lines 1, 2, 3). Scale (0-180) vs. -Log I/I_o.	Freed	P. Simack	1-46-0
1-10	Table. High Temperature Absorption Data of $Eu(NO_3)_3$ Solutions.	Freed	P. Simack	1-47-0
1-10	Table. Dependence of the Ratio of the Two Spectral Forms on the Total Nitrate Ion Concentration for Two Possible Summed Extinction Coefficients of the "Nitrate Form."	Freed	P. Simack	1-48-0
1-10	Table. Low Tempera~~u~~ture Absorption Data of $Eu(NO_3)_3$ Solutions.	Freed	P. Simack	1-49-0
1-10	Table. Splitting af a J equals 3 Level and Transitions that can appear as a function of the symmetry of the electric field.	Freed	P. Simack	1-50-0
1-10	Room Temperautre Summed Extinction Data of $Eu(NO_3)_3$ Solutions.	Freed	P. Simack	1-51-0
~~Table~~ 1-10	Table. F^o, S^o, and $H^o_{diss.}$ calculated from $K_{diss.}$.	Freed	P. Simack	1-52-0
1-10	Table. Integrated Area Calculations Peak Value Calculations.	Freed	P. Simack	1-53-0
1-10	Table. Absorption Data of $EuCl_3$ Soltuions.	Freed	P. Simack	1-54-0

Date	Caption	Dept.	Photographer	Number
1-10	Figure 1. Solubility of $AgNO_3$ at 20°C. in mixtures of cyclohexene and a solvent.	Freed	P. Simack	1-55-0
1-9	Upper surface of #2 experimental hole and shielding.	Borst	R. F. Smith	1-56-0
1-9	#2 experimental hole and shielding.	Borst	R. F. Smith	1-57-0
1-12	Annealing oven in glass shop.	Kuper	Smith & Walton	1-58-0
1-12	Lathe for working glass which has been softened by the gas jets.	Kuper	Smith & Walton	1-59-0
1-12	Automatic device for counting dust samples.	Kuper	Smith & Walton	1-60-0
1-13	Cosmotron Progress.	A. Wise	Smith & Walton	1-61-0
1-12	Ball joint for arm of densitometer.	R. Roth	R. J. Walton	1-62-0
1-13	Tradiscantia plants in greenhouse showing results of various degrees of radiation.	Christensen	R. F. Smith	1-63-0 thru 1-70-0
1-13	Radioautographs: Manganese 56 Hornets.	V. Bowen	M. H. Bull	1-71-0 A and 1-71-0 B
1-13	Radioautographs:			1-72-0-A
1-13	Sixteen-inch high pressure cloud chamber mounted with illuminating arcs on the pole piece of the large electromagnet. During operation, the chamber is advanced into a position inside a pressure cylinder and the large steel member becomes a part of of the magnetic ypke (not shown at right).	Shutt [illegible]nson	R. F. Smith	1-74-0
1-16	Interior of laboratory in new biology building, showing center bench arrangement. Services suspended above the bench make it possible to remove the bench without disconnecting any of the facilities.	Stangby	R. F. Smith	1-76-0

Date	Caption	Dept.	Photographer	Number
1-18.	Experimental Arrangement: Monitor Counter Neurton Source Counter Telescope.	Wantuch	C. Lee	1-77-0
1-18	Block Diagram of Circuits.	Wantuch	C. Lee	1-78-0
1-18	Neutron Deuetron Scattering at 5.5.Mev. Neutron Scattering Angle vs. Diff. Cross SEction (Barns per Steradian).	Wantuch	C. Lee	1-79-0
1-18	Neutron Deuteron Scattering at 4.5 Mev. Neutron Scattering Angle vs. Diff. Cross Section (Barns per Steradian).	Wantuch	C. Lee	1-80-0
1-18	Apparatus for detecting Photo-Neutrons from Beryllium or Heavy Water.	der Mateosian	C. Lee	1-81-0
1-18	Graph. Electrom Momentum 1.0 equals $776H_\rho$ vs. Scale 16 per minute.	Alburger	C. Lee	1-82-0
1-18	Power Supply (Top view)	Porter	R. F. Smith	1-83-0
1-18	Power Supply (Bottom view).	Porter	R. F. Smith	1-84-0
1-18	Graph. Bias voltage of proportional counter vs. Relative counting rate.	Goldhaber	M. H. Bull	1-85-0
1-18	Graph. Decay of 374 kev. Metastable State of Pb^{204}. Delay in u-sec. vs. Relative coincidence rate.	Goldhaber	M. H. Bull	1-86-0
1-18	Decay Scheme for Pb^{204}.	Goldhaber	M. H. Bull	1-87-0
1-18	Decay of Photo-Neutrons from Bi^{206} plus Be. Time in days vs. Counts per 64 min.	Goldhaber	M. H. Bull	1-88-0

Date	Caption	Dept.	Photographer	Number
1-18	Degradation of C^{14} Lactic Acid formed during the Action of 3N KOH on Glucose.	Gibbs	M. H. Bull	1-89-0
1-18	C, H, O, and OH arrangements.	Gibbs	M. H. Bull	1-90-0 & 1-91-0
1-18	C^{13} Content ofCarbon Dioxide from the Decarboxylation of Malonic Acid.	Bothner-by	M. H. Bull	1-92-0
1-18	Preparation of Samples.	Bothner-by	M. H. Bull	1-93-0
1-18	Photo-Neutron Intensities.	der Mateosian	M. H. Bull	1-94-9
1-18	Attempt to Isolate Carbon Dioxide from Carbonyl Carbon of Cyclopentanone.	Bothner-by	M H. Bull	1-95-0
1-18	Decarboxylation of Natural Malonic Acid.	Bothner-by	M. H. Bull	1-96-0
. 18	Test fro Isotopic Exchange.	Bothner-by	M. H Bull	1-97-0
1-18	C^{13} Isotopic Effect in the Decomposition of Oxalic Acid.	Bothner-by	M. H. Bull	1-98-0
1-18	C^{13} Isotope Effect in the Pyrolysis of Barium Adipate..	Bothner-by	M. H. Bull	1-99-0
1-18	C^{13}Isotope Effect in the Decarboxylation of Malonic Acid.	Bothner-by	M. H. Bull	1-100-0
1-19	Scintillation Counter in Coincidence.	Goldhaber	R. J. Walton	1-101-0 and 1-102-0
1-19	Classification of Nuclear Isomers/	Goldhaber	C Lee	1-103-0
1-19	Graph. Mev. (0-10) vs. Cts./sec. ($1-10^4$) Scintillation Spectrometer Lens Spectrometer Gamma Ray.	Goldhaber	C. Lee	1-104-0

Date	Caption	Dept.	Photographer	Number
1-19	Graph. IN^{115} Kurie Plot of the Lens Spectrometer Data. E Mev. vs. $\sqrt{N(p)/pW}$.	Goldhaber	C. Lee	1-105-0
1-19	Graph. 0-6 Kev. → Energie vs. → Intensität.	Goldhaber	C. Lee	1-106-0
1-19	Copy. Figure 1c. Meridian stereontet drawn to 2° intervals.	t Atherton	M. H. Bull	1-107-0
1-19	Tradiscantia plant in greenhouse showing buds.	Christensen	R. F. Smith	1-108-0
1-19	Tradisaantia plant showing node.	Christensen	R. F. Smith	1-109-0
1-23	Absorption edges for K-shells in Kev. Critical absorption of 27 kev. γ-ray from Pa^{231} in Cd, In, and Sn. vs. Counts/min.	Goldhaber	M. H. Bull	1-110-0
1-23	Energy of K_{ai} Lines as function of Bias Voltage of Proportional Counter. Volts vs. Kev.	Goldhaber	M. H. Bull	1-111-0
1-23	γ-Ray from Gd. in equilibrium with Tb^{161} (5.5 days) daughter.	Goldhaber	M. H. Bull	1-112-0
1-23	Weather instrument for Meteorology. (3/4 view).	Mazzarella	R. F. Smith	1-113-0
1-23	Weather instrument for Meteorology. (side view).	Mazzarella	R. F. Smith	1-114-0
1-23	Weather instrument for Meteorology. (close-up).	Mazzarella	R. F. Smith	1-115-0
1-24	General view of Cosmotron interior.	M. White	Smith & Walton	1-116-0
1-24	Cutting process to be used on Pile. Front view before cutting.	Nicholson	R. F. Smith	1-117-0
1-24	Cutting process to be used on Pile. Front view after cutting with slag in place.	Nicholson	R. F. Smith	1-118-0

Date	Caption	Dept.	Photographer	Number
1-24	Cutting procees to be used on Pile. Front view after cutting with slag removed/	Nicholson	R. F. Smith	1-119-0
1-24	Cutting process to be used on Pile. (side view).	Nicholson	R. F. Smith	1-120-0
1-24	Cutting process to be used on Pile. Back view after cutting.	Nicholson	R. F Smith	1-121-0
1-24	Photo-volt Densitometer.	HPhysics	R. J. Walton	1-122-0
1-24	P. M. Darkroom #1.	HPhysics	R. J. Walton	1-123-0
1-24	Drying Cabinet.	HPhysics	R. J. Walton	1-124-0
1-24	Personnel Monitoring equipment on self-service racks.	HPhysics	R. J. Walton	1-125-0
1-24	Weston Densitometer.	HPhysics	R. J. Walton	1-126-0
1-24	Building Survey Departmetnal Office.	HPhysics	R. J. Walton	1-127-0
1-24	Kelly Koett - Five Fold Hand and Foot Counter.	HPhyscis	R. J. Walton	1-128-0
1-24	P. M. Rack in Pile Lobby.	HPhysics	R. J. Walton	1-129-0
1-24	Beta Calibration Rack (closed).	HPhysics	R. J. Walton	~~1-30-0~~ 1-130-0
1-24	Beta Calibration Rack (open).	HPhysics	R. J. Walton	1-131-0
1-24	Film Badge Contamination Checker.	HPhyiscs	R. J. Walton	1-132-0
1-24	Microscope with Special Stage Adapter.	HPhyiscs	R. J. Walton	1-133-0
1-24	Weston Densitometer.	HPhysics	R. J. Walton	1-134-0
1-24	Individual Exposure Record.	HPhyiscs	R. J. Walton	1-135-0
1-24	Dust Collecting Tray.	HPhyiscs	R. J. Walton	1-136-0
1-24	Dental Film Developing Rack.	HPhysics	R. J. Walton	1-137-0
1-24	Pocket Chambers, Dosimeters, and Charge Boxes.	HPhysics	R. J. Walton	1-138-0 ~~1-139~~
1-24	Composite parts of film badges and film ring.	HPhysics	R. J. Walton	1-139-0

Date	Caption	Dept.	Photographer	Number
1-24	This typical counting room is located in the Chemistry complex. Equipment shown includes, at the left, two beta-gamma counters installed in their lead pigs and their associated scaling and timing units. The center lower shelf contains two ionization chambers for measurement of beta and gamma activity. The one on the left has been made sensitive to gamma radiation. The one lying on its side is used to monitor radioactive gases containing soft radiation. The instrument on the lead block is a manometer used to place an electrostatic charge on the chambers and to read the integrated radiation measured by the chambers. At the right of the shelf is an alpha scintillation counter. The bookcase contains an assortment of survey instruments and equipment necessary for the preparation of samples. The health physicist shown is a member of the building survey group whose duty is to service the entire Chemistry department.	HPhysics	R. J. Walton	1-127-0

Date	Caption	Dept.	Photographer	Number
1-25	Copy - Table. Analysis of the Fixed Gases.	EJohnson	M H. Bull	1-140-0
1-25	Copy - Table. The Effect of Propylene and Butene-1 on the Rate of Decomposition of Cyclopentanone.	EJohnson	M. H. Bull	1-141-0
1-25	Copy - Table. The Effect of Nitric Oxide, Hydrogen, and Biacetyl on the Decomposition of Cyclopentanone.	EJohnson	M. H. Bull	1-142-0
1-25	Copy - Table. Formation of Carbon Monoxide and Hydrogen.	EJohnson	M. H. Bull	1-143-0
1-25	Copy - Figure 7. Wave lenghhs in millimicrons vs. Molar Extinction x 10^3. (Ultra Violet Absorption of 2-cyclopentin-1-one):	EJohnson	M. H Bull	1-144-0
1-25	Copy - Figure 14. Effect of Increased Surface.	EJohnson	M. H. Bull	1-145-0
1-25	Copy of Diagram/	EJohnson	M. H. Bull	1-146-0
1-25	Copy Diagram of Flow System.	EJohnson	M. H. Bull	1-147-0
1-25	Copy - Figure 12. The Effect of Pressure on the per cent Decomposition of Cycclopentanone. P_o vs. %Deocmposition.	EJohnson	M H. Bull	1-148-0
1-25	Copy - Figure 11. Pressure-Time Curve. Thermal Decomposition of Cyclopentanone at 512°C. (P_o equals 140 mm.) Time in min. vs. P_t minus P_o).	EJohnson	M. H. Bull	1-150-0
1-25	Copy - Figure 15. The Rate of Disappearance of Carbonyl. Time in min. vs. $\frac{PCO}{P_oC_5H_8O}$ x 100	EJohnson	M. H. Bull	1-149-0
1-25	Copy - Figure 16. Activation Energy Plot for Cyclopentanone. $1/T \times 10^{-3}$ vs. $k \times 10^{-2}$.	EJohnson	M H. Bull	1-151-0

Date	Caption	Dept.	Photographer	Number
1-25	Copy - Figure 17. Formation of 2-Cyclopentin-1-one and Hydrogen. Time in min. vs. $\frac{PH_2}{P_o}$ in % $\frac{P_{C_5H_6O}}{P_o}$ in %.	EJohsnon	M. H. Bull	1-152-0
1-25	Copy - Figure 18. Rate of Disappearance of Cyclopentanone obtained from Carbonyl and 2-cyclopentin-1-one values. Time n min. vs. $\frac{PCO \text{ plus } PC_5H_6O}{P_oC_5H_8O}$	EJohnson	M. H Bull	1-153-0
1-25	Copy - Table 8. The Effect of Butene-1.	EJohnson	M. H. Bull	1-154-0
1-25	Copy. Molecular Arrangement of H, C, and O.	EJohnson	M. H Bull	1-155-0
1-25	Copy Diagram of Furnace Design.	EJohnson	M. H. Bull	1-156-0
1-25	Copy Diagram of: To Analysis System.	EJohnson	M. H. Bull	1-157-0
1-25	Copy - Figure 1. Thermal Decomposition of Hydrocarbons: full curve, experimental; dotted curve, calculated.	EJohnson	M. H. Bull	1-158-0
1-20	Cyclotron Progress- Assembling the D's.	WMerkle	R. J. Walton	1-159-0 thru 1-171-0
1-27	Proportional Counter Tube.	Goldhaber	C. Lee	1-172-0
1-27	Position of Gamma rays from Sm^{151}, Tb^{161}, and Pa^{231} with respect to K absorption edges.	Goldhaber	C. Lee	1-173-0
1-27	→ Bias Voltage vs. Clicks/min. Th L X-ray lines as K X-ray.	Goldhaber	M. H. Bull	1-174-0
1-27	Block Diagram of Pulse Height Selector used with Proportional Counter.	Goldhaber	C. Lee	1-175-0

Date	Caption	Dept.	Photographer	Number
1-27	Decay of Ca^{49} (8.5m) and its Sc^{49} (1hr) daughter formed by Neutron Activation of Enriched Ca^{48}. Time in hours vs. Relative Intensity	der Mateosian	C. Lee	1-176-0
1-27	BNL Seal -(Pile and Stack.)	Garfield	Herbert	1-177-0 [illegible]
1-10	Dr. Lee Farr.	Portrait	J. F. Garfield	1-178-0
1-10	Charles Dunbar.	Port~~t~~rait	J. F Garfield	1-179-0
1-10	Charles Dunbar.	Portrait	J. F. Garfield	1-180-0
1-30	Ac~~c~~elerator Tube.	Hafner	C. Lee	1-181-0
1-20	View of concrete in Ryan's yard.	EHunter	E. J. Hunter	1-182-0 thru 1-184-0
1-20	Machine in Ryan's concrete yard.	EHunter	E. J. Hunter	1-185-0
1-20	View of Skull Cracker.	EHunter	E. J. Hunter	1-186-0 and 1-187-0
1-20	Concrete- Pile in background.	EHunter	E. J. Hunter	1-188-0 and 1-189-0
1-30	South Gate view looking north.	DMallory	R. F. Smith	1-190-0
1-30	○ Pure N_2, 21 Dec. "49. 3% CO_2, 28 Dec. '49. Tank Pressure, Psi Gauge vs. Sparkover, MV.	Hafner	M. H. Bull	1-191-0
1-30	Cross Section.	Hafner	M. H. Bull	1-192-0
1-30	Terminal Linkages to Ground.	Hafner	M. H. Bull	1-193-0

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1-11	Slide No. A-816-0 156	Sparrow Biology	R.F. Smith	1-194-0
1-19	Slide No. A-1888-F 158	Sparrow	R.F. Smith	1-195-0
1-19	Slide No. A-2218-H 157	Sparrow	R.F. Smith	1-196-0
1-26	Slide No. A-2029-A (A) 159	Sparrow	R.F. Smith	1-197-0
1-26	Slide No. A-2029-A (B) 160	Sparrow	R.F. Smith	1-198-0
1-26	Slide No. A-1921-B (A) 162	Sparrow	R.F. Smith	1-199-0
1-26	Slide No. A-1921-B (B) 161	Sparrow	R.F. Smith	1-200-0

1-182-0 three

1-190-0

To be put in books

1-9	Ear of corn grown in the Co^{60} field under continuous radiation Two mutations shown are for the <u>r</u> factor, one of three complementary genes which produce color.	Singleton	R. F. Smith	1-16-0

February

Date	Caption	Dept.	Photographer	Number
2-1	Electronics Diagram.	Kuper	M. H Bull	2-1-0
2-1	Table L. 13July, 1949 (continued).	Yuan	M. H. Bull	2-2-0
2-1	Table II. 8August, 1949 (continued).	Yuan	M. H. Bull	2-3-0
2-1	Table III. 11August, 1949 (continued).	Yuan	M. H. Bull	2-4-0
2-1	Table II. 8August, 1949. Balloon flight #6, Unit III, Geomagnetic Latitude 27^{o}N. Counting Rates in Counts per minute.	Yuan	M. H. Bull	2-5-0
2-1	Table I. 13July, 1949. Balloon Flight #3, Unit II, Geomagnetic Latitude 0^{o}. Counting Rates in Counts per minute.	Yuan	M. H. Bull	2-6-0
2-1	Table III. 11August, 1949. Balloon Flight #8, Unit I, Geomagnetic Latitude 33^{o}N. Counting Rates in Counts per minute.	Yuan	M, H. Bull	2-7-0
2-1	Neutron Density in Free Atmosphere.	Yuan	M. H. Bull	2-8-0 thru 2-10-0
2-1	Copy of 323895. Generator.	MGWhite	M. H. Bull	2-11-0
2-1	Copy. 1.Base, Column, Equipotential Shield. John L. Danforth Chife Engineer.	MGWhite	M. H. Bull	2-12-0
2-1	Eastern Satndard Time. 19November, 1949. The composite of 15 Geiger Counters.	M.Weiss	M. H. Bull	2-13-0
2-1	Graph of K^{40}. H vs. Counts per minute.	Alburger	M. H. Bull	2-14-0
2-2	Copies for Research Library:			
2-2	Copy - Subject Index. (Nuclear Science Abstracts, vol. 3:5, Sept. 15, 1949, Page D).	ResLibe	C. Lee	2-15-0

Date	Caption	Dept.	Photographer	Number
2-2	Copy - Figure 1. X-Ray Diffraction Data punched card. (Analytical Chemistry, vol. 21:10, October, 1949, p. 1173).	ResLibe	C. Lee	2-16-0
2-2	Copy - Figure 1. (Journal of Chemical Education, vol. 26:3, March, 1949, p. 164).	ResLibe	C. Lee	2-17-0
2-2	Copy - Figure 2. Sorting Punch Cards by a "deep" needling operation. "Shallow" needling is done by passing the sorting needle through an outer hole. (General Electric Research Laboratory, Guy and Geisler, p. 995)	ResLibe	C. Lee	2-18-0
2-2	Copy. Drawing showing the principal components of the RCA Ultrfax system. (Ultrafax, p.22).	ResLibe	C. Lee	2-19-0
2-2	Copy - Figure 6. Card for Subtitle Class. (Industrial and Engineering Chemistry, vol. 40, Jan.-June, 1948, p. 733).	ResLibe	C. Lee	2-20-0
2-2	Copy. Flexisort System. (Flexisort, one page).	ResLibe	C. Lee	2-21-0
2-2	Copy - Figure 6. Sample of Coded Master Film (magnified) (Engineering Research Association, Report, p. 10).	ResLibe	C. Lee	2-22-0
2-2	Copy - Figure 3. IBM Index Card. (Journal of Chemical Education, vol. 26:3, March, 1949, p. 140).	ResLibe	C. Lee	2-23-0
2-2	Copy - Figure 1. Index Card. (General Mills Research Laboratory, Paper #98, by A. F. Isbell).	ResLibe	C. Lee	2-24-0

Date	Caption	Dept.	Photographer	Number
2-3	Range of Beta Particles in Aluminum. Range in Al (mg/gm^2) vs. Energy (Mev.)	Cowan	C. Lee	2-25-0
2-3	Range-Energy Realtion of Beta Particles. Mev. vs Absorber Thickness in mm.	Cowan	C. Lee	2-26-0
2-3	Continuous Dust Monitor Station E-1. The Beta-Gamma Counter The Alpha Counter. 7 Days by Hours vs.			
2-3	Curves showing influence of rain on natural radioactive background level. Curve A, counting rate of unshielded thin wall counter; curve C, counter shielded to exclude beta rays. Note that axtivity peaks coincide with periods of rainfall.	Cowan	M. H. Bull	2-28-0
	Rain. 7 Days by hours vs. Counts per minute averaged hourly.	Cowan	M. H. Bull	2-28-0
2-3	Topographic Survey of a part of Brookhaven National Laboratory.	MacCorn-ack	M. H. Bull	2-29-0 thru 2-46-0
2-6	Topographic Survey of a part of Brookhaven National Laboratory.	MacCorn-ack	M. H. Bull	2-47-0 thru 2-52-0
2-3	Heat testing equipment in T-197.	Warner	R. J. Walton	2-53-0 and 2-54-0
2-7	Copy - Figure 1. Typical Punch Card.	Res.Libe	C. Lee	2-55-0

Date	Caption	Dept.	Photographer	Number
2-3	Cosmotron. Overall rear view of 6" motorized vacuum valve.	W.Moore	R. J. Walton	2-56-0
2-3	Cosmotron. One half scale model of accelerator core.	W.Moore	R. J. Walton	2-57-0
2-3	Cosmotron accelerator core "ferr-amic" laminated.	W.Moore	R. J. Walton	2-58-0
2-3	Cosmotron accelerator Ferro-cube laminated.	W.Moore	R. J. Walton	2-59-0
2-3	Cosmotron. Setting block in place, which in turn will support magnet sections.	W.Moore	R. J. Walton	2-60-0
2-3	Cosmotron. Filing supporting block to insure a true square surface to set magnet sections on.	W.Moore	R. J. Walton	2-61-0
2-3	Cosmotron. Pinning up center columns in prepar-ation for setting magnet blocks in place.	W.Moore	R. J. Walton	2-62-0
2-3	Cosmotron. Vacuum pump unit.	W.Moore	R. J. Walton	2-63-0
2-3	Cosmotron. 18" bell jar vacuum pump for use in evaporation and gaussing studies.	W.Moore	R. J. Walton	2-64-0
2-3	Cosmotron. Front view of 6" motorized vacuum valve.	W.Moore	R. J. Walton	2-65-0
2-3	Cosmotoon. Front view of 20" motorized vacuum valve.	W.Moore	R. J. Walton	2-66-0
2-3	Cosmotron. Rear view showing spider on 20" motorized vacuum valve.	W.Moore	R. J. Walton	2-67-0

Date	Caption	Dept.	Photographer	Number
2-3	Cosmbtron test stand.	W.Moore	R. J. Walton	2-68-0
2-3	Cosmotron. Setting and leveling support for Blocks for magnet sections.	W.Moore	R. J. Walton	2-69-0
2-3	Cosmbtron. Cabinet being constructed for R.F. stage on Cosmotron.	W.Moore	R. J. Walton	2-70-0
2-3	Cosmotron. Cut and uncut sections for accelerator core.	W.Moore	R. J. Walton	2-71-0
2-7	Copy of graph. Grid Voltage Volts.	Pressman	M. H. Bull	2-72-0
2-7	Atttomatic Dust Collector.	Kuper	Walton & Smith	2-73-0
2-7	Isomeric Transition Probabilities. Kev. vs. Log_{10} $Sec.^{-1}$.	Goldhaber	P. Simack	2-74-0
2-2	Bi-Vane Recorder. (back view(.	Syler	J. F. Garfield	2-75-0
2-2	Bi-Vane Recorder. (top view of contacts).	Syler	J. F. Garfield	2-76-0
2-2	Bi-Vane Recorder. (bottom view).	Syler	J. F. Garfield	2-77-0
2-2	Bi-Vane Recorder. (front view).	Syler	J. F. Garfield	2-78-0
2-2	Bi-Vane Recoreder. (Recorder case).	Syler	J. F. Garfield	2-79-0
2-8	Photomicrograph of Lead Surface. 220 X Mag.	G.Johnson	R. F. Smith	2-80-0 & 2-81-0
2-8	Extraction Apparatus. (rear view).	F.Miles	R. F. Smith	2-82-0
2-8	Extraction Apparatus. (front view).	F.Miles	R. F. Smith	2-83-0
2-8	Extraction Apparatus. (exploded view).	F.Miles	R. F. Smith	2-84-0

Date	Caption	Dept.	Photographer	Number
2-9	Copy of graph. Grid Volts.	Pressman	M. H. Bull	2-85-0
	Monitoring equipment for recording activity of airborne dust. Air is pumped through strip of filter paper which is moved at rate of one inch per hour and passes in front of beta-gamma and alpha counters (in lead shields).	Kuper	Smith & Walton	2-86-0
	exposure revealed it as only one of several visible stars in IC 4182.	Borst	C. Lee	2-87-0
2-10	Copy - <u>Scientific American</u>, Dec. 1949 p. 21. Supernova was photographed by an exposure of 20 minutes on September 10, 1937. It is only a star visible in extragalactic system. IC 4182.	Borst	C. Lee	2-88-0
2-10	Copy - <u>Scientific American</u>, Dec. 1949 Supernova was invisible by January 19, 1942. An 85-minute exposure did not show it at all. Photographs by Walter Baade of Mount Wilson.	Borst	C. Lee	2-89-0
2-10	Copy - <u>Scientific American</u>, Dec. 1949 p. 21. Red Light from hydrogen and nitrogen (6563, 6548, and 6584 A.) reveals the structure of those gases in the same Crab Nebula. The whole mass is illuminated by a small, dense, hot star that is imbedded in it.	Borst	C. Lee	2-90-0
2-10	Copy - <u>Scientific Monthly</u>, Jan. 1948, p. 20. Light Curves of Three Supernova of Type I.	Borst	C. Lee	2-91-0
2-10	Copy - <u>Scientific Monthly</u>, Jan. 1948, p. 21- Light Curve of the Supernova in IC 4182.	Borst	C. Lee	2-92-0

Date	Caption	Dept.	Photographer	Number
2-10	Distribution of Intraperitoneally Injected Iron in the Duck.	Sharpe	M. H. Bull	2-93-0
2-10	Distribtuion of Intraperitoneally Injected Iron in Rats.	Sharpe	M. H. Bull	2-94-0
2-10	Copy. Location of the Glands of Internal Secretion.	Nims	M. H . Bull	2-95-0
2-10	Copy of Histogram. Survival of Rats after X-Irradiation.	Nims	M. H. Bull	2-96-0
2-10	Copy. Standard Crane Signals for Pile Building Ovrehead Crane.	Turovlin	M. H. Bull	2-97-0
2-9	Continuous Dust Monitor Station E-1. Beta Gamma Counter. Alpha Counter.	Kuper	M. Herbert	2-98-0
2-				
2-9	Typical record of the natural radio-activity associated with dust, obtained with equipment shown in 2-86-0. The peaks, which in this case are due principally to natural thorium B and its daughters, occur during periods of still air accompanied by a temperature inversion, as indicated by the difference in air temperature between the 410' and 18' levels in the meteorology tower (top curve).	Kuper	M. Herbert	2-98-0
2-17	Van de Graaff Chart.	Hoey	M.H. Bull	2-103-0
2-17	Van de Graaff Injector Chart.	Hoey	M. H. Bull	2-104-0
2-17	Proton beam hitting quartz shutter at 15 feet. (2-105-0 A less exposed).	Hafner	R. J. Walton	2-105-0 and 2-105-0 A
2-17	Waste Disposal Diagram.	Manowitz	M. Herbert	2-106-0
2-20	Diagram for Paper (Air Flow).	Shutt	P. Bennett	2-107-0

Date	Caption	Dept.	Photographer	Number
2-20	a. $SmBr_3 \cdot 6H_2O$ in solution at 193°K b. $SmBr_3 \cdot 6H_2O$ in solution at 77°.	Freed	P. Bennett	2-108-0
2-20	A. $Nd(NO_3)_3 \cdot 6H_2O$ in solution at 193°K. b. $Nd(NO_3)_3 \cdot 6H_2O$ in solution at 77° c. $NdBr_3 \cdot 6H_2O$ in solution at 77°.	Freed	P. Bennett	2-109-0
2-20	A. $Nd(NO_3) \cdot 6\ H_2O$ in solution at 298°K. B. $Nd(NO_3) \cdot 6H_2O$ in solution at 193° C. $Nd(NO_3) \cdot 6H_2O$ in solution at 77° C'. $Nd(NO_3) \cdot 6H_2O$ in solution at 77° (different exposure time). D. $NdBr_3 \cdot 6H_2O$ in solution at 77°.	Freed	P. Bennett	2-110-0
2-20	Diagram of Apparatus.	Freed	P. Bennett	2-111-0
2-17	Proton beam tube attached to front of Van de Graaff generator.	Hafner	R. J. Walton	2-112-0
2-20	Progress on Assembly of "D" for Cyclotron.	Merkle	R. J. Walton	2-113-0 thru 2-117-0
2-21	Composite of four factory requisitions	Hoey	M. H. Bull	2-118-0
2-21	Copies from <u>The Physical Review, Vol. 75, 2nd Series, Number 6.</u>			
2-21	Graph - Mass Number vs. Extrapolated Range.	Katcoff	C. Lee	2-119-0
2-21	Graph - Number of Al Absorbers vs. Activity.	Katcoff	C. Lee	2-120-0 ~~2-220-0~~
2-21	Graph - Most Probable Energy vs. Mass Ratio in Fission of Pu^{239}.	Katcoff	C. Lee	2-121-0
2-21	Graph - Figure 3. Variation of total kinetic energy with mass ratio for U^{235} and U^{233}.	Katcoff	C. Lee	2-122-0

Date	Caption	Dept.	Photographer	Number
2-23	Copy - Spectra of the Crab Nebula. The positions of the end points of the slit are marked with corresponding numbers on the spectrograms and on the image of the nebula.	Borst	M. H. Bull	2-123-0
2-23	Copy - Emission Nebulosity Near Nova Ophiuchi of 1604. The computed position of the nova is marked by a cross, the circle indicates the mean error in the computed position.	Borst	M. H. Bull	2-124-0
2-21	Cosmotron - close-up of scribe.	Moore	R. J. Walton	2-125-0
2-21	Cosmotron - pivot arm for base plate scribe.	Moore	R. J. Walton	2-126-0
2-21	Cosmotron - overall view of magnet base.	Moore	R. J. Walton	2-127-0
2-221	Cosmotron - overall view of men scribing quadrant of magnet base plate.	Moore	R. J. Walton	2-128-0
2-23	Cosmotron - applying blue ink to runners for scribe mark.	Moore	R. J. Walton	2-129-0
2-23	Cosmotron - center punch marking centers on base plate to set magnet section in place.	Moore	R. J. Walton	2-130-0
2-23	Cosmotron - scribing base plate for setting magnet section in place.	Moore	R. J. Walton	2-131-0
2-23	Cosmotron - checking center punch marking on scribe line of base plate.	Moore	R. J. Walton	2-132-0
2-27	Copy - Microwave Spectroscope.	Wentink	M. H. Bull	2-133-0
2-27	Copy - Microwave Frequency Standard.	Wentink	M. H. Bull	2-134-0

Date	Caption	Dept.	Photographer	Number
2-28	Copies from Helvetica Physica Acta:			
2-28	p. 161, figure 3. Photometre Compteur de Geiger.	derMateo-sian	M. H. Bull	2-135-0
2-28	p. 162, figure 4 Mesure du Tc (element 43).	derMateo-sian	M. H. Bull	2-136-0
2-28	p. 159, figure 2.	derMateo-sian	M. H. Bull	2-137-0
2-28	p 163. K_{alpha2} K_{alpha1} K_{beta1}.	derMateo-sian	M. H. Bull	2-138-0
2-28	P. 156, figure 1.	derMateo-sian	M. H. Bull	2-139-0
2-28	Copy. Ultr-Violet Induced Deficiencies in Maize.	Singleton	M. H. Bull	2-140-0
2-21	Close-up of leaf feeding of a young albino corn plant.	German	R. F. Smithh	2-141-0
2-21	Frank German tending young albino corn plants being leaf fed in the greenhouse.	German	R. F. Smith	2-142-0
2-21	Close-up of corn plant in gravel filled crock being fed radioactive nutrients.	MKoester	R. F. Smith	2-143-0
2-21	Radioactive nutrient deeding of corn plants. General view of set-up in the greenhouse. Large crocks below the bench contain the radio isotopes which are pumped into crocks containing gravel to support the young corn ~~pla~~ plants.	MKoester	R. F. Smith	2-144-0

Date	Caption	Dept.	Photographer	Number
2-21	Corn grass grown in greenhouse.	Singleton	R. F. Smith	2-145-0
2-21	Record photos of Tradiscantia Plants in greenhouse.	Sparrow	R. F. Smith	2-146-0 thru 2-152-0
2-2	Slide No. A-2690-A (C) 167	Sparrow	R.F. Smith	2-153-0
2-2	Slide No. A-2690-A (B) 166	Sparrow	R.F. Smith	2-154-0
2-2	Slide No. A-2690-A -(A) 165	Sparrow	R.F. Smith	2-155-0
2-2	Slide No. A-2741-A -(A) 169	Sparrow	R.F. Smith	2-156-0
2-2	Slide No. A-2741-A (F) 174	Sparrow	R.F. Smith	2-157-0
2-2	Slide No. A-2741-A-(B) 170	Sparrow	R.F. Smith	2-158-0
2-2	Slide No. A-2741-A (E) 173	Sparrow	R.F. Smith	2-159-0
2-2	Slide No. A-2741-A (C) 171	Sparrow	R.F. Smith	2-160-0
2-2	Slide No. A-2741-A (D) 172	Sparrow	R.F. Smith	2-161-0
2-2	Slide No. A-2726A 168	Sparrow	R.F. Smith	2-162-0
2-16	Slide No. A-2741-C (A) 175	Sparrow	R.F. Smith	2-163-0
2-16	Slide No. A-2741-C (C) 177	Sparrow	R.F. Smith	2-164-0
2-16	Slide No. A-2741-C (B) 176	Sparrow	R.F. Smith	2-165-0
2-26	Slide No. A-2726-E (B) 179	Sparrow	R.F. Smith	2-166-0
2-26	Slide No. A-2772-C (A) 183	Sparrow	R.F. Smith	2-167-0
2-26	Slide No. A-2726-C (A) 178	Sparrow	R.F. Smith	2-168-0
2-27	Slide No. A-3016-D (B) 211	Sparrow	R.F. Smith	2-169-0
2-27	Slide No. A-2684-E (A) 207	Sparrow	R.F. Smith	2-170-0
2-27	Slide No. A-2684-E (C) 209	Sparrow	R.F. Smith	2-171-0
2-27	Slide No. A-2684-E (B) 208	Sparrow	R.F. Smith	2-172-0
2-27	Slide No. A-2756-E (B) 199	Sparrow	R.F. Smith	2-173-0
2-27	Slide No. A-2726-G 197	Sparrow	R.F. Smith	2-174-0
2-27	Slide No. A-2895-N (B) 203	Sparrow	R.F. Smith	2-175-0
2-27	Slide No. A-2899-L (A) 191	Sparrow	R.F. Smith	2-176-0

Date	Caption	Dept.	Photographer	Number
2-27	Slide No. A-2899-M 201	Sparrow	R.F. Smith	2-177-0
2-27	Slide No. A-2914-M (D) 188	Sparrow	R.F. Smith	2-178-0
2-27	Slide No. A-2948-A (B) 181	Sparrow	R.F. Smith	2-179-0
2-27	Slide No. A-2948-A (A) 180	Sparrow	R.F. Smith	2-180-0
2-27	Slide No. A-2948-A (C) 182	Sparrow	R.F. Smith	2-181-0
2-27	Slide No. A-2899-L (B) 192	Sparrow	R.F. Smith	2-182-0
2-27	Slide No. A-2899-E (A) 205	Sparrow	R.F. Smith	2-183-0
2-27	Slide No. A-2899-C (B) 206	Sparrow	R.F. Smith	2-184-0
2-27	Slide No. A-2991-A 190	Sparrow	R.F. Smith	2-185-0
2-27	Slide No. A-2914-M (B) 186	Sparrow	R.F. Smith	2-186-0
2-27	Slide No. A-2914-M (A) 185	Sparrow	R.F. Smith	2-187-0
2-27	Slide No. A-3016-D (A) 210	Sparrow	R.F. Smith	2-188-0
2-27	Slide No. A-2984-B 189	Sparrow	R.F. Smith	2-189-0
2-27	Slide No. A-3045-L (D) 196	Sparrow	R.F. Smith	2-190-0
2-27	Slide No. A-3045-L (E) 195	Sparrow	R.F. Smith	2-191-0
2-27	Slide No. A-3045-L (B) 194	Sparrow	R.F. Smith	2-192-0
2-27	Slide No. A-3059-A (A) 212	Sparrow	R.F. Smith	2-193-0
2-28	Slide No. A-3080-A 219	Sparrow	R.F. Smith	2-194-0
2-28	Slide No. A-3075-A 217	Sparrow	R.F. Smith	2-195-0
2-28	Slide No. A-3059-A (B) 213	Sparrow	R.F. Smith	2-196-0
2-28	Slide No. A-3067-A 218	Sparrow	R.F. Smith	2-197-0
2-28	Slide No. A-3045-L (A) 193	Sparrow	R.F. Smith	2-198-0
2-28	Slide No. A-2914-M (E) 187	Sparrow	R.F. Smith	2-199-0
2-28	Slide No. A-2895-N (A) 202	Sparrow	R.F. Smith	2-200-0
2-28	Slide No. A-2772-E (B) 184	Sparrow	R.F. Smith	2-201-0
2-28	Slide No. A-2610-B (B) 215	Sparrow	R.F. Smith	2-202-0
2-28	Slide No. A-2610-B (C) 216	Sparrow	R.F. Smith	2-203-0

Date	Caption	Dept.	Photographer	Number
2-28	Slide No. A-2610-B (A) 214	Sparrow	R.F. Smith	2-204-0
2-28	Slide No. A-2571-D 200	Sparrow	R.F. Smith	2-205-0
2-2	Slide No. A-1921-B-C	Sparrow	R.F. Smith	2-206-0

March

Date	Caption	Dept.	Photographer	Number
3-1	Copy - Retarding potential curves to recoil ions The horizontal line represents the background counting rate.	Davis	M. H. Bull	3-1-0
3-1	Copy - Experimental arrangement of G-M and electron multiplier tubes	Davis.	M. H. Bull	3-2-0
3-1	Copy - figure1 Apparatus for neutrino recoil measurements The P32 source faces the electron multiplier.	Davis	M. H. Bull	3-3-0
3-1	Copy - Recoil Energy (EV) vs. Recoils in 100 H_{rho} intervals per Beta particles.	Davis	M. H. Bull	3-4-0
3-1	Copy - figure 1. Absorption spectra of carotene (90% alpha and 10% beta). A - in heptane at room temperature. B - in equal volume mixture of propane and propene at $-196^{o}C$.	Freed	M. H. Bull	3-5-0
3-1	Copies of intsruments.	Blewett	M. H. Bull	3-6-0 and 3-7-0
3-1	Table on Types of Accelerators.	Blewett	M. H. Bull	3-8-0
3-1	Copy. Schematic representation and circuit diagram of the neutralized oscillator and dee circuits.	Blewett	M. H. Bull	3-9-0
3-1	Copy. Pictorial view of cavity.	Blewett	M. H. Bull	3-10-0
3-1	Copy The 30 kw tube.	Blewett	M. H. Bull	3-11-0
3-1	Copy. Rotary Condensor.	Blewett	M. H. Bull	3-12-0
3-1	Copy. Oscillator Frequency vs. Saturating Current.	Blewett	M. H. Bull	3-13-0

Date	Caption	Dept.	Photographer	Number
3-1	Copy of figure 8. Time (sec) vs. Frequency in mc/sec	Blewett	M. H. Bull	3-14-0
3-1	Copy of figure 9. A. Ferrite bricks. B. 54 - Ferrite rods.	Blewett	M. H. Bull	3-15-0
3-1	Copy of figure 8. Saturable Inductance used in the Oscillator	Blewett	M. H. Bull	3-16-0
3-1	Copy of Diagram	Blewett	M. H. Bull	3-17-0
3-2	Copy of graph. Hours after injection vs Uptake (Per cent).	Orlowski	M. H. Bull	3-18-0
3-2	Nuclear Shell Structure. (After M. G. Mayer).	Friedlander	P. Simack	3-19-0
3-2	Selection Rules for Gamma-Ray Transitions.	Friedlander	P. Simack	3-20-0
3-2	Distribution of Nuclear Isomers.	Friedlander	P. Simack	3-21-0
3-2	Nominal Electron Voltage vs. Positive Ion Current (arbitrary units) (a,b,a lines).	Schaeffer	P. Simack	3-22-0
3-2	Nominal Electron Voltage vs. Positive Ion Current (arbitrary units) (one line).	Schaeffer	P. Simack	3-23-0
3-1	Delivered to Collins Radio Corp. as per John F. Garfield on March 17,1950.	Merkle	John Garfield	3-24-0
3-1	Delivered to Collins Radio Corp. as per John F. Garfield on Mar. 17, 1950.	Merkle	John Garfield	3-25-0
3-1	Lower half of shorting bar going into position.	Merkle	J. F. Garfield	3-26-0
3-1	Upper half of shorting bar going into position.	Merkle	J. F. Garfield	3-27-0
3-1	Carlson adjusting tension on shorting bar contact.	Merkle	J. F. Garfield	3-28-0 and 3-29-0

Date	Caption	Dept.	Photographer	Number
3-1	Assembly of feed-through insulators for attachment to obround section.	Merkle	J. F. Garfield	3-30-0
3-1	Section steps of assembly of feed-through insulators for attachment to obround section.	Merkle	J. F. Garfield	3-31-0
3-1	View from inside dee stems looking at septium and deflector.	Merkle	J. F. Garfield	3-32-0
3-1	Deflection dee side open showing details of the deflector	Merkle	J. F. Garfield	3-33-0
3-1	Upper half of shorting bar details b before being assembled to lower section.	Merkle	J. F. Garfield	3-34-0
3-3	Copy - figure 1. Gamma-Rays from AU^{198}.	derMateosian	P. Bennett	3-37-0
3-3	Copy - Table I. Preliminary values of wave-length and energy.	derMateosian	P. Bennett	3-38-0
3-7	Meter face.	O'Neill	M. H. Bull	3-39-0
3-7	Nuclear Separation A^{o} vs. Energy Volts.	Schaeffer	M. H. Bull	3-40-0
3-7	Comparison between Calculated and Observed Values of $\frac{x^+}{\overline{x}_2{}^+}$ Peak Ratios for Hydrogen, Deuterium, and Tritium.	Schaeffer	M. H. Bull	3-41-0
3-7	Equilibrium Constant for the Reaction $H_2 + T_2 = 2HT$. Theoretical Value $K = 2.56$.	Schaeffer	M. H. Bull	3-42-0
3-7	Effect of Ion Accelerating Voltage on $\frac{x^+}{\overline{x}_2{}^+}$ Peak Ratios for Hydrogen, Deuterium, and Tritium with 30 volt electrons.	Schaeffer	M. H. Bull	3-43-0

Date	Caption	Dept.	Photographer	Number
3-7	Nominal Electron Voltage vs. Positive Ion Current (Arbitrary Units)	Schaeffer	M. H. Bull	3-44-0
3-7	Nuclear Separation A^{o} vs. Energy Volts.	Schaeffer	M. H. Bull	3-45-0
3-7	Nominal Electron Voltage vs. Positive Ion Current (Arbitrary Units)	Schaeffer	M. H. Bull	3-46-0
3-7	Chromosomes showing the different phases.	Sparrow	M. H. Bull	3-47-0
3-7	Zygotene, Pachytane, and Diplotene.	Sparrow	M. H. Bull	3-48-0
3-7	Extinction Values of Extract from Isolated Pollen-Mother-Cells of Trillium.	Sparrow	M. H. Bull	3-49-0
3-7	Chromosome Fragmentation in Trillium.	Sparrow	M. H. Bull	3-50-0
3-7	Copy of Chart for slide.	Sparrow	M. H. Bull	3-51-0
3-7	Copy of a photograph of a Cyclotron beam	Sachs	M. H. Bull	3-52-0
3-7	Loading magnet sections on trailer truck for moving to accelerator building.	Moore	R. J. Walton	3-53-0
3-7	Moving magnet sections from test shack to accelerator building via trailer truck.	Moore	R. J. Walton	3-54-0 and 3-55-0
3-7 3-2	Setting magnet sections in place on bed plate.	Moore	R. J. Walton	3-56-0
3-6	General view of Cosmotron donut showing progress.	Moore	R. J. Walton	3-57-0 and 3-58-0

Date	Caption	Dept.	Photographer	Number
3-8	Minutes vs. 1-Fraction Exchanged. Runs 11, 49, 59.	Dodson	C. Lee	3-59-0
3-8	$1/T \times 10^4$ vs. k. Formal^{-1} min^{-1} 6.18 f HNO_3 2.01 f HNO_3 1.00 f HNO_3.	Dodson	C. Lee	3-60-0
3-8	$1/(H^+)^2$ (Formal^{-2}) vs. k. Formal^{-1} -min^{-1}. 0^oC. and -10^oC.	Dodson	C. Lee	3-61-0
3-8	CeIV(Formal) x 10^3 vs. $\frac{R}{\text{CE III}}$ (min^{-1}) 0^oC. and 10^oC.	Dodson	C. Lee	3-62-0
3-8	$1/(H^+)$ (Foraml^{-1}) vs. (Foraml-min^{-1}) x 10^5.	Dodson	C. Lee	3-63-0
3-8	CeIII (Formal) x 10^3 vs. T 1/2 (CeIII + CeIV) min-Formal. 0^oC. and 15^oC.	Dodson	C. Lee	3-64-0
3-8	CeIII (Formal) x 10^3 vs. T 1/2 (CeIII + CeIV) minutes-Formal.	Dodson	C. Lee	3-65-0
3-8	CeIV (Formal) x 10^3 vs. T 1/2 (CeIII + CeIV) minutes-Formal.	Dodson	C. Lee	3-66-0
3-7	Vitamin B12.	Anderson	M. H. Bull	3-67-0
3-7	Dr. Hale inspecting frozen mice which contain yellow fever virus. Mice so treated provide a virus bank for future investigation. The virus is a pathogenic organism so small that it will pass through the finest bacteriological filters and unlike bacteria, it will grow ~~only~~ and propigate in living tissue. only	Farr	R. F. Smith	3-68-0

Date	Caption	Dept.	Photographer	Number
3-7	Technician inspecting frozen mice containing virus of yellow fever. (Rest of caption the same as 3-68-0).	Farr	R. F. Smith	3-69-0
3-7	Scene in the Medical Department at BNL. Fertile chicken eggs which have been injected with yellow fever virus are placed near a source of radiation as part of research on the effect which radiaoctive rays have on a virus. Using a remote controll tong and a mirror, the technician is safeguarded from exposure herself to the radiation. The geiger counter, center right, detects the radioactivity of the source which is located under the light plug which the technician is lifting.	Medical LFarr	R. F. Smith	3-70-0
3-7	The skilled hands and dextrous fingers of a medical technician at BNL translate a scientist's idea regarding effects of radiation into an actual test of his prediction. In this instance virus particles are being injected into a chick embryo to be subsequently radiated from isotopic sources in hopes that the results may lead to useful conclusions in regard to control of effects of radiation and disease.	Medical LFarr	R. F. Smith	3-71-0
	[illegible] and Mary Koester.	MKoester	R. F. Smith	3-75-0
3-9	Copy - figure 18. The solid line indictes the rate of respiration at 25^{o} of 8 leaves of <u>Helianthus</u> (dark 43.5 hrs., 7% d-glucose, as per Table 49). The broken line indicates the rate of respiration at 25^{o} of 8 similar leaves (dark 42 75 hrs., 11% glycocoll as per Table 50).	MGibbs	C. Lee	3-76-0
3-9	Copy - figure 11. Rate of respiration of 6 leaves of <u>Helianthus annuus</u> at 25^{o}.	MGibbs	C. Lee	3-77-0
3-9	Composite - Manganese 56 Hornets.	Orlowski (re: Bowen)	C. Lee	3-78-0

Date	Caption	Dept.	Photographer	Number
3-9	Copy - Apparatus for High Temperature Filtering.	Teitel ✓	C. Lee	3-79-0
3-10	Pile Building Pile Services Plan View.	FOX ~~Dugan~~	C. Lee	3-80-0
3-10	Copy of Map. Ground water level in May, 1949.	deLaguna	C. Lee	3-81-0
3-10	Copy of Map. Ground Water Level End of December 1949.	deLaguna	C. Lee	3-82-0
3-10	Copy of Map Change in Ground Water Level from May to December, 1949.	deLaguna	C. Lee	3-83-0
3-13	Copy from Crystal Growth: p. 14, figure 2.	GJohnson	M. H. Bull	3-84-0
3-13	Copy from Crystal Growth: p. 126, figure 10.	GJohnson	M. H. Bull	3-85-0
3-13	Copy from Kinetik der Phasenbildung p. 30, figure 3.	GJohnson	M. H. Bull	3-86-0
3-13	Copy from Crystal Growth: p.67, figures 5 and 6.	GJohnson	M. H. Bull	3-87-0
3-13	Copy from Kinetik der Phasenbildung p. 30, figure2.	GJohnson	M. H. Bull	3-88-0
3-13	Copy from Crystal Growth; p. 49, figure 1b.	GJohnson	M. H. Bull	3-89-0
3-11	Birthday party at the hospital.	JBurt	J. F. Garfield	3-90-0 thru 3-94-0

Date	Caption	Dept.	Photographer	Number
3-10	Exterior of Mobile Trailer for Raddoactive Monitoring.	MWeiss	R. J. Walton	3-95-0
3-10	Mobile Trailer Power Control Panel.	MWeiss	R. J. Walton	3-96-0
3-10	G.M. Counter Assembly inside Mobile Unit.	MWeiss	R. J. Walton	3-97-0
3-10	Southeast quadrant of Cosmotron magnet sections.	WMoore	R. J. Walton	3-98-0
3-10	Measuring gauges for setting magnet blocks in place.	WMoore	R. J. Walton	3-99-0
3-14	Composite of Single Exposure of Gamma Radiation (from Co^{60}) on growth of Tradescantia Paludosa.	Sparrow	P. Bennett	3-100-0
3-14	Copy from Tele-Vision Engineering, January, 1950, p. 25.	EHealey	P. Simack	3-101-0
3-14	Copy from Tele-Vision Engineering, January, 1950, p. 21.	EHealey	P. Simack	3-102-0
3-14	Copy from RCA Equipment Catalog, 1949, p. 37.	EHealey	P. Simack	3-103-0
3-14	Copy from FM Radio Handbook, 1946 Edition, p. 84.	EHealey	P. Simack	3-104-0
3-14	Copy from FM Radio Handbook, 1946 Edition, p. 80.	EHealey	P. Simack	3-105-0
3-14	Copy from RCA Equipment Catalog, 1949, p. 46 (top).	EHealey	P. Simack	3-106-0
3-14	Copy from RCA Equipment Catalog, 1949, p. 61.	EHealey	P. Simack	3-107-0
3-14	Copy from RCA Equipment Catalog, 1949, p. 46 (bottom).	EHealey	P. Simack	3-108-0

Date	Caption	Dept.	Photographer	Number
3-9	A mass spectrometer in operation at the Pathology Laboratory of the Medical Department at BNL. The equipment is being used to analyze heavy elements, in this case nitrogen, as part of research being conducted to learn how much of a given element is incorporated in specific body tissues. Stable isotopes or radioactive isotopes that is, elements radiating rays or particles - may be used in the experiments. A mass spectrometer is a device which can separate lighter nuclei of atoms of heavier nuclei. In this experiment, for example, the object is to isolate heavier nitrogen nuclei containing 15 neutrons and protons from lighter nitrogen nuclei containing 14 such nuclear particles. As particles entering a mass spectrometer speed through slits in a powerful magnet, the magnetic field curves the lighter nuclei in one path and the heavier in another.	Medical LFarr	R. F. Smith	3-118-0

Date	Caption	Dept.	Photographer	Number
3-15	Simple calculation of total fragmentation induced following irradiation at early-mid diplotene with 50 r. of X-rays.	Sparrow	P. Bennett	3-109-0
3-14	Terminals and relays for Cosmotron controls - Area 15, Area 4, and Console.	Mede	R. J. Walton	3-110-0 thru 3-113-0
3-15	A typical arrangement of pocket chambers and film badges to survey an area	MWeiss	R. J. Walton	3-114-0
3-15	Pocket Ionization Chamber and Film Badges as used for Area Survey.	MWeiss	R. J. Walton	3-115-0
3-9	Microtome cutting paraffin ribbon. Tissue has been fixed and imbedded so that very thin sections may be cut for microscopic examination.	LFarr	R. F. Smith	3-116-0
3-9	Specimens imbedded for microtoming.	LFarr	R. F. Smith	3-117-0
3-9	Technician using Mass Spectrometer in Pathology Lab.	LFarr	R. F. Smith	3-118-0
3-9	Technician using titration equipment in Pathology Lab.	LFarr	R. F. Smith	3-119-0
3-15	Dr. R. Patterson.	Portrait	J. F. Garfield	3-120-0
3-15	Dr. R. Patterson.	Portrait	J. F. Garfield	3-12~~2~~1-0
3-15	Dr. R Patterson.	Portrait	J. F. Garfield	3-122-0
3-16	Radioactive Isotopes for distribution studies of an element in end products.	VanSlyke	M. Herbert	3-123-0
3-16	Radioactive Sodium - Na24. For detecting normal and restricted blood circulation.	VanSlyke	M. Herbert	3-124-0
3-16	Radioactive Tracers for studying permeability of cell membranes.	VanSlyke	M. Herbert	3-125-0
3-16	Radioactive Cobalt - Co60. For external gamma ray treatment.	VanSlyke	M. Herbert	3-126-0

Date	Caption	Dept.	Photographer	Number
3-16	Radioactive Calcium - Ca45. For studying plant nutrition.	VanSlyke	M. Herbert	3-127-0
3-16	Radioactive Cobalt - Co60. For liquid level gage.	VanSlyke	M. Herbert	3-128-0
3-16	Radioactive Gold - Au198. For treatment of: A. Diseases of lymphoid gland system. B. Multiple local lesions.	VanSlyke	M. Herbert	3-129-0
3-16	Radioactive Sodium - Na24. For studying sodium turnover in the body.	VanSlyke	M. Herbert	3-130-0
3-16	Radioactive Iodine - I131. For studying antibodies.	VanSlyke	M. Herbert	3-131-0
3-16	Radioactive Iodine - I131. For studying thyroid gland physiology.	VanSlyke	M. Herbert	3-132-0
3-16	Radioactivity of Carbon 14.	VanSlyke	M. Herbert	3-133-0
3-16	Radioactive Phosphorus - P32. For locating extent of brain tumors.	VanSlyke	M. Herbert	3-134-0
3-16	Radioactive Iodine - I131. For auto-radiographic examination of the thyroid gland.	VanSlyke	M. Herbert	3-135-0
3-16	Radioactive Iodine - I131. For diagnosing and treating thyroid gland disorders.	VanSlyke	M. Herbert	3-136-0
3-16	Radioactive Sulfur - S35. For studying of body s use of amino acids.	VanSlyke	M. Herbert	3-137-0
3-16	Nuclear Reactor - Uranium Pile.	VanSlyke	M. Herbert	3-138-0
3-16	Radioactive Carbon - C14. For studying food production by plants - Photosynthesis.	VanSlyke	M. Herbert	3-139-0
3-16	Pile production of Radioisotopes.	VanSlyke	M. Herbert	3-140-0

Date	Caption	Dept.	Photographer	Number
3-16	Uranium fission and beta chain decay.	VanSlyke	M. Herbert	3-141-0
3-16	Radioactive Phosphorus - P32. For treatment of: A. Polycythemia Vera. B. Chronic Leukemia.	VanSlyke	M. Herbert	3-142-0
3-16	Radioactive Sodium - Na24. For diagnosing of pumping qualities of the heart - Radiocardiography.	VanSlyke	M. Herbert	3-143-0
3-16	Radioactive Strontium - Sr90. For treatment of small lesions.	VanSlyke	M. Herbert	3-144-0
3-16	Radioactive Iron - Fe59. For studying whole blood preservation.	VanSlyke	M. Herbert	3-145-0
3-16	Radioactive Carbon - C14. For studying cancer producing agents - Carcinogens.	VanSlyke	M. Herbert	3-146-0
3-16	Radioactive Isotopes for isotope dilution analysis.	VanSlyke	M. Herbert	3-147-0
3-16	Radioactive Cobalt - Co60. For interstitial gamma ray source.	VanSlyke	M. Herbert	3-148-0
3-16	Indium Foil Actvity as a function of Cadmium Cover Thickness.	Kunstadter	M. H. Bull	3-149-0
3-16	Horizontal Traverse ⊙ Average of Three Runs 10.16 cm. above 20'' graphite pedastal.	Hughes	M. H. Bull	3-150-0
3-16	Vertical Measurement ⊙ Average of Three Runs 20'' graphite pedastal.	Hughes	M. H. Bull	3-151-0
3-17	The Meaning of Half-Life.	VanSlyke	M. H. Bull	3-152-0
3-17	What an Isotope is.	VanSlyke	M. H. Bull	3-153-0

Date	Caption	Dept.	Photographer	Number
3-17	Nuclear Structure in E Coli. (K. A. Bisset).	BRubin	M. H. Bull	3-154-0 and 3-155-0
3-17	Nuclear Cycle in E Coli.	BRubin	M. H. Bull	3-156-0
	Copies of photographs from Commissariat a L'Energie Atomique: Service de Documentation:			
3-16	ZOE: The general view of the atomic pile in the Fort de Chatillon.	Goudsmit	C. Lee	3-157-0
3-16	Control panel for the first Frenchnch atomic pile, ZOE. A single operator starts, stops, and regulates the power of the pile.	Goudsmit	C. Lee	3-158-0
3-16	Research Laboratory: DC amplifierss apparatus for personnel protection against radiation, and laboratory for cosmic rays.	Goudsmit	C. Lee	3-159-0
3-16	Laboratory for the Study of Particle Detectors: Geiger-Muller counters, ionization chambers, scintillation counters.	Goudsmit	C. Lee	3-160-0
3-16	Coincidence selector with a master group and twelve channels for the study of cosmic rays, with visualization of the selected particles.	Goudsmit	C. Lee	3-161-0
3-16	Portable ionization chamber for the necessary measurement of personnel protection. Made for gamma rays and slow neutrons. Direct readings in roentgens per 8 hours.	Goudsmit	C. Lee	3-162-0
3-16	Ionization chamber with boron trifluoride for counting small neitrons. Lenghh: 20mm. Diameter: 8mm.	Goudsmit	C. Lee	3-163-0

Date	Caption	Dept.	Photographer	Number
3-16	Glass Geiger-Muller Counters: The cathode consists of a layer of aquadag, applied to the outside. Threshold: 800 volts Plateau: 400 volts Slope: Less than 3% per 100 volts	Goudsmit	C. Lee	3-164-0
3-16	AVP portable detector of gamma rays for precision measurement.	Goudsmit	C. Lee	3-165-0
3-16	Experimental Mounting of an Ion Source: Intended for a cavity resonance accelerator.	Goudsmti	C. Lee	3-166-0
3-16	Small Van de Graaff Generator: Intended for the study of the functioning of an electrostatic machine and for research of materials used at high voltage.	Goudsmit	C. Lee	3-167-0
3-16	Accelerator Service: View of the laboratory of the Experimental Electrostatic Generator, In the center: The generator. On top: The 2 generating volt meters for measuring the tension and for stabilization. In the back: Stabilization and control circuits.	Goudsmit	C. Lee	3-168-0
3-16	Pumping bench for the filling of counters, and for cathode pulverization.	Goudsmit	C. Lee	3-169-0
3-16	Apparatus for 10 channels for measuring coincidence differences between 10^{-6} and 10^{-3} seconds.	Goudsmit	C. Lee	3-170-0
3-16	Ionization Chamber with Proportional Amplifiers: Electronic amplitude selector and apparatus for photographing registration.	Goudsmit	C. Lee	3-171-0
3-16	Apparatus for the study, by absorption and coincidences, of the soft part radioactive radiations	Goudsmit	C. Lee	3-172-0

Date	Caption	Dept.	Photographer	Number
3-16	Van de Graaff Tube: Special glass and kovar rings. Aralde assembly model.	Goudsmit	C. Lee	3-173-0
3-16	Pump shafts (5,000 litres per second stainless steel).	Goudsmit	C. Lee	3-174-0
3-16	Oil Diffusion Pump. (3 stage).	Goudsmit	C. Lee	3-175-0
3-16	Oil Diffusion Pump. (1 stage).	Goudsmit	C. Lee	3-176-0
3-16	Polarograph Assemblage: Consisting of a non-registering electric apparatus and the support for drop electrodes. Hydrogen distributor, especially conceived for continuous operation.	Goudsmit	C. Lee	3-177-0
3-16	Mass Spectrometer for Masses 3 and 4: Intended for the analysis of deuterium with tracers of hydrogen, by simultaneous collection of ions of masses 3 and 4, and by the balancing of corresponding ionizing currents through a proper electrical device.	Goudsmit	C. Lee	3-178-0
3-16	Enclosure for the manipulation of heavy water, protected from the atmosphere: It can also be used for work with toxic materials or radioactive substance, and emit alpha rays or soft betas.	Goudsmit	C. Lee	3-179-0
3-16	Apparatus for Ultra-microchemistry: The operations are performed under the microscope with the help of a micro-manipulator of Fontbrunne (constructed by Baudoin). The observation is facilitated by projection on a ground glass screen.	Goudsmit	C. Lee	3-180-0
3-16	Shop for the extraction of plutonium and fission products.	Goudsmit	C. Lee	3-181-0
3-16	Aerial view of the center of nuclear studies in Saclay. The photograph shows the progress obtained three months after the beginning of construction.	Goudsmit	C. Lee	3-183-0

Date	Caption	Dept.	Photographer	Number
3-20	Range and energy distributions obtained for 1.3 $\pm$ 0.25 Mev neutrons	HMotz	M. H. Bull	3-184-0
3-20	Sum of Ranges, $R_t + R_a$ (R.U.).	HMotz	M. H. Bull	3-185-0
3-20	Disintegratoon - Neutron Energy as Parameter.	HMotz	M. H. Bull	3-186-0
3-20	Li^6 Disintegration with Fast Neutron	HMotz	M. H. Bull	3-187-0
3-17	Coil in gap of test block.	Moore	R. J. Walton	3-188-0
3-17	Condenser bank for testing magnet sections.	Moore	R. J. Walton	3-189-0
3-17	Coil in gap of test block.	Moore	R. J. Walton	3-190-0 thru 3-192-0
3-9	Set-up of cosmic ray apparatus.	Piccioni	Piccioni	3-193-0 thru 3-195-0
3-17	Control for motor generator.	AWise	R. J. Walton	3-196-0 thru 3-198-0
3-18	Model of magnet section set-up for testing.	Moore	R. J. Walton	3-199-0
3-20	File cabinets housing all photographic prints used in magnet testing.	Moore	R. J. Walton	3-200-0
3-21	Unloading MG base plate support.	AWise	R. J. Walton	3-201-0 thru 3-203-0
3-20	Heat Cycling Test.	Bareis	R. J. Walton	3-204-0 A and 3-204-0 B

Date	Caption	Dept.	Photographer	Number
3-20	Mrs. Blewett correlating information on the magnet blocks.	Moore	R. J. Walton	3-204-0 and 3-205-0
3-20	Vacuum Chamber Panel Tester.	Cosmo Moore	R. J. Walton	3-206-0
3-20	Power Supply for Intermediate Stages of RF Power Amplifier.	Cosmo Moore	R. J. Walton	3-207-0
3-20	Test stand fpr 12 Tube Photoelectric-Alarm Flow Meter.	Cosmo Moore	R. J. Walton	3-208-0
3-20	12 Tube Photoelectric-Alarm Flow Meter.	Cosmo Moore	R. J. Walton	~~3-209-0~~ 3-211-0
3-20	Ferrite blocks for accelerator.	Moore	R. J. Walton	3-209-0
3-20	Switch of resistor on side of magnet model.	Moore	R. J. Walton	3-210-0
3-20	12 Tube Photoelectric-Alarm Flow Meter.	Cosmo Moore	R. J. Walton	3-211-0
3-23	Hot cells collection trench.	FHorn	M. H. Bull	3-212-0
3-23	Non-Acid Off-Gas.	FHorn	M. H. Bull	3-213-0
3-23	Acid Off-Gas.	FHorn	M. H. Bull	3-214-0
3-22	Cross Section of 20 Mev donut. Full size section of pocket.	Palevsky	M. H. Bull	3-215-0
3-23	Minutes vs. Parts /million NaCl. Parts /million Fluorescein.	deLaguna	M. H. Bull	3-216-0
3-19	Blowers and ducts - Hot Lab.	FHorn	R. F. Smith	3-217-0

Date	Caption	Dept.	Photographer	Number
3-19	Pumping layout in tank room.	FHorn	R. F. Smith	3-218-0
3-19	Two tanks in Hot Lab.	FHorn	R. F. Smith	3-219-0
3-19	View showing tank arrangement.	FHorn	R. F. Smith	3-220-0
3-19	Valve to large tanks.	FHorn	R. F. Smith	3-221-0
3-19	Interior of cell showing pipes and screening.	FHorn	R. F. Smith	3-222-0
3-19	Control panel.	FHorn	R. F. Smith	3-223-0
3-19	Top of tank showing plumbing.	FHorn	R. F. Smith	3-224-0
3-23	Comparison of quantitative Cytochemical and Microchemical analyses of DNA in Trillium pollen mother cells at pachytene.	Moses	C. Lee	3-225-0
3-23	Quantitative analysis of DNA in Trillium pollen mother cells during meiosis; Steele's modification of Schneider's method.	Moses	C. Lee	3-226-0
3-23	Quantitative determination of DNA in 5.1 u sections of Trillium pollen mother cells at pachytene from extinction at 550 mu of the Feulgen Reaction.	Moses	C. Lee	3-227-0
3-23	"B" and "Spare" Systems.	FHorn	C. Lee	3-228-0
3-23	"A" Waste System.	FHorn	C. Lee	3-229-0
3-24	Comparison of Evaporative Equipment.	Manowitz	P. Bennett	3-230-0
3-24	Comparison of Auxiliary Facilities and Services.	Manowitz	P. Bennett	3-231-0
3-24	Increase in specific activity of respiratory CO_2 in Mouse "A" during a starvation period.	Steele	M. H. Bull	3-232-0

Date	Caption	Dept.	Photographer	Number
3-24	Comparison of starving state respiratory CO_2 specific activities in Mouse MOD and Mouse "A".	Steele	M. H. Bull	3-233-0
3-24	Synthetic Mouse Diet.	Steele	M. H. Bull	3-234-0
3-24	The excretion of the carbon of ingested C^{14} Sucrose.	Steele	M. H. Bull	3-235-0
3-24	Specific activity of the carbon of various tissues of Mouse MOD at a time 5 weeks after ingesting 441 uc of C^{14} Sucrose.	Steele	M. H. Bull	3-236-0
3-24	Semi-log diagram of the fraction of the ingested dose of sucrose carbon expired as CO_2 during various time intervals after ingestion.	Steele	M. H. Bull	3-237-0
3-24	Semi-log plot of C^{14} remaining in Mouse MOD after at times following ingestion of 441 uc of C^{14} Sucrose,	Steele	M. H. Bull	3-238-0
3-24	Fraction of expired CO_2 derived from constituents of meals fed to Mouse "A".	Steele	M. H. Bull	3-239-0
3-24	CO_2/5 minute period expired by Mouse "A" after feeding.	Steele	M. H. Bull	3-240-0
3-24	R.Q. of Mouse "A" after feeding.	Steele	M. H. Bull	3-241±0
3-24	O_2/5 minute period consumed by Mouse "A" after feeding.	Steele	M. H. Bull	3-242-0
3-24	Fraction of expired CO derived from meals labeled Mouse "A" fed non-labeled sucrose amino acid mixture.	Steele	M. H. Bull	3-243-0
3-24	Fraction of expired CO_2 derived from meals of sucrose amino acid under various conditions.	Steele	M. H. Bull	3-244-0

Date	Caption	Dept.	Photographer	Number
3-24	Cut-off in contribution of sucrose carbon from a meal caused by subsequent feeding.	Steele	M. H. Bull	3-245-0
3-24	Butanol-Propionic Acid Water System.	Steele	M. H. Bull	3-246-0
3-24	Phenol Water System.	Steele	M. H. Bull	3-247-0
3-24	Diagramatic Flow Sheet of Apparatus (Mal Herbert's negative).	Bretton	M. Herbert	3-248-0
3-22	Foundation for motor generator in Cosmotron.	AWise	R. J. Walton	3-249-0
3-22	Accident damage to car.	Bergin	R. J. Walton	3-250-0
3-24	Photomicrograph of end of capillary pen for Meteorology.	Mazzarella	R. F. Smith	3-251-0
3-24	Cosmotron, ~~Model.~~ SCHEMATIC DRAWING	APC	C. Lee	3-252-0
3-24	Thresholds for Photo-Neutron Reactions.	Palevsky	P. Bennett	3-253-0 & 3-254-0
3-24	Spider Test Gap.	Warner	R. J. Walton	3-255-0 and 3-256-0
3-27	Processing Cost Estimate.	Manowitz	C. Lee	3-257-0
3-27	Comparison of Major Operating Costs.	Manowitz	C. Lee	3-258-0
3-28	Schematic diagram of fission chain reaction using a moderator to slow neutrons to speeds more likely to cause fission.	CWilliams	P. Simack	3-259-0
3-28	Schematic diagram of chain reaction from fission neglecting effect of neutron speed.	CWilliams	P. Simack	3-260-0

Date	Caption	Dept.	Photographer	Number
3-28	Cobione and Irradiated Vitamin B-12 traces.	Chem. Prosser	M. H. Bull	3-261-0
3-28	84 uc Tracer I.V. Thiouracil. 5 gm. q 8h.	Medical Miller	P. Bennett	3-262-0
3-28	126 uc I^{131} p.o. Methyl Thiouracil. 0.5 gm. q 8h.	Medical Miller	P. Bennett	3-263-0
3-28	Copy - figure 3. Pattern burns show the protection offered by light colored clothing.	Medical LFarr	P. Bennett	3-264-0
3-28	Copy - figure 12. Generalized epilation in a 19-year-old Japanese who had suffered generalized radiation sickness.	Medical LFarr	P. Bennett	3-265-0
3-28	Copy - figure 7. Necrosis of gum and underlying mandible in a 38-year-old Japanese 12 weeks after the bombing.	Medical LFarr	P. Bennett	3-266-0
3-29	Meteorology Stations and Meteorology and Monitoring Stations combined. (Negative in M. Herbert's possession) No. neg. 3-268-0	I & P Orlowski	M. Herbert	3-267-0 or (~~3-268-0~~)
3-28	Welding slats on Cosmotron magnet.	Moore Acc.	R. J. Walton	3-269-0
3-28	General view of the Cosmotron vault.	Moore Acc.	R. J. Walton	~~3-269-0~~ 3-270-0
3-28	Bi-Vane.	Belfour Met.	C. Lee	3-271-0
3-29	mM NH_4^+ Glutamate in 25 cc. medium vs. Toxin L_f per cc. vs. Mg. Bacterial Nitrogen from 25 cc. medium.	Medical RDrew	P. Simack	3-272-0
3-29	Thickness, Inches x 10^3 vs. $E_p(d) - E_p(\infty)$.	Physics Hughes	P. Simack	3-273-0

Date	Caption	Dept.	Photographer	Number
3-29	d (cm) vs. E_2 (%).	Hughes Physics	P. Simack	3-274-0
3-29	$\overline{\text{delta}}$ (cm) vs. $d_{1/2}$ (cm).	Hughes Physics	P. Simack	3-275-0
3-29	delta % of Total Thickness vs. $\overline{\text{delta}}$ (cm).	Physics Hughes	P. Simack	3-276-0
March	Medical negatives.	Medical LFarr	J. F. Garfiedd	3-277-0 thru 3-290-0

(continued next page)

Date	Caption	Dept.	Photographer	Number
3-31	Figure IV - The Cylinder.	BRubin Biology	P. Simack	3-291-0
3-31	Figure III - The Surface of a "Finite" Slab.	BRubin Biology	P. Simack	3-292-0
3-31	Figure 2 - The loss of energy F_2 as a function of S/R - other dimensions considered "infinite", etc.	BRubin Biology	P. Simack	3-293- 0
3-31	Figure I - The "Infinite" Slab.	BRubin Biology	P. Simack	3-294-0
3-31	"Sphere " "Slab " "Cydinder"	BRubin Biology	P. Simack	3-295-0
3-30	Experimental corn grown in the radiation field by Dr. Singleton showing mutation due to radiatioh at 19 meters.	Biology Singleton	R. F. Smith	3-296-0
3-30	Experimental corn grown in the radiation field by Dr. Singleton showing mutation due to radiation at 29 meters.	Biology Singleton	R. F. Smith	3-297-0
3-29	Exterior of Biology Building.	Biology	R. J. Walton	~~3-298-0~~
3-29	Exterior of Guest House.	Housing	R. J. Walton	3-299-0
3-29	Bias and Generator field supply for ten channel proportional~~m~~ field supply.	Physics HMotz	R. J. Walton	3-300-0
3-29	Rear view of Bias and Generator field supply for ten channel proport-ional field supply.	Physics HMotz	R. J. Walton	3-301-0
3-29	Chassis for Bias and Generator field supply for ten channel proportional field supply.	Physics HMotz	R. J. Walton	3-302-0

Date	Caption	Dept.	Photographer	Number
3-29	Pouring concrete pad for motor-generator.	Cosmo AWise	R. J. Walton	3-303-0
3-29	Close-up of armature for motor-generator.	Cosmo AWise	R. J. Walton	3-304-0
3-29	Overall view of armature for motor-generator.	Cosmo AWise	R. J. Walton	3-305-0
3-29	Metal stress and tension testing machine in T-480.	Reactor Kammerer	R. J. Walton	3-306-0 and 3-307-0
3-31	Dr. Ken Greene testing apparatus for model of Cosmotron.	Cosmo Greene	R. F. Smith	3-308-0
3-31	Flywheel for motor-generator in the Cosmotron.	Cosmo AWise	R. F. Smith	3-309-0
3-31	Photomicrograph of Foraminiferer. Neg. Mag. 110X Print Mag. 220X.	Geology LWeiss	R. F. Smith	3-310-0 and 3-330-0
3-31	Albino corn ~~pal~~ plant in greenhouse being leaf fed.	Biology FGerman	R. F. Smith	3-331-0
3-31	Photo of gap between poles of magnet of Cyclotron.	Cyclo Merkle	R. F. Smith	3-332-0 & 3-333-0
3/2/	Slide # A-2892-N 2 (221)	AHSparrow	RF Smith	3-334-0
3-2	Slide No. A-2892-N (1) 220	Biology Sparrow	R.F. Smith	3-335-0
3-2	Slide No. A-2892-N (3) 222	Sparrow	R.F. Smith	3-336-0
3-2	Slide No. A-2756-C 223	Sparrow	R.F. Smith	3-337-0
3-8	Slide No. A-3008-A 231	Sparrow	R.F. Smith	3-338-0
3-8	Slide No. A-2734-D (1) 224	Sparrow	R.F. Smith	3-339-0
3-8	Slide No. A-2734-D (2) 225	Sparrow	R.F. Smith	3-340-0
3-8	Slide No. A-2734-D (3) 226	Sparrow	R.F. Smith	3-341-0
3-8	Slide No. A-2734-E (1) 232	Sparrow	R.F. Smith	3-342-0
3-8	Slide No. A-2734-E (2) 233	Sparrow	R.F. Smith	3-343-0

Date	Caption	Dept.	Photographer	Number
3-8	Slide No. A-2734-E (3) 234	Sparrow	R.F. Smith	3-344-0
3-8	Slide No. A-2506-L (1) 227	Sparrow	R.F. Smith	3-345-0
3-8	Slide No. A-2506-L (3) 229	Sparrow	R.F. Smith	3-346-0
3-8	Slide No. A-2506-L (2) 228	Sparrow	R.F. Smith	3-347-0
3-8	Slide No. A-2506-L (4) 230	Sparrow	R.F. Smith	3-348-0
3-15	Slide No. A-2910-C 235	Sparrow	R.F. Smith	3-349-0

April

Date	Caption	Dept.	Photographer	Number
4-3	Histogram: All Tracks. Pairs.	Physics Hornbostel	C. Lee	4-1-0
4-3	Hours after injection vs. Counts per minute per uP.	Biology JSachs	C. Lee	4-2-0 & 4-3-0
4-3	Distribution of Acid-Soluble Phosphoru in livers of Rats.	Biology JSachs	C. Lee	4-4-0
4-5	Energy (Mev) vs. $\sqrt{N/f}$.	Physics Alburger	P. Bennett	4-5-0
4-5	K^{40} Energy (Mev) vs. $\sqrt{N/f}$.	Physics Alburger	P. Bennett	4-6-0
4-5	P^{32} Energy (Mev) vs. $\sqrt{N/f}$.	Physics Alburger	P. Bennett	4-7-0
4-6	Comparison of Observed and Calculated Shifts.	Physics VCohen	M. H. Bull	4-8-0
4-6	Diagram: Modulating Field; Slow sweep in time.	Physics VCohen	M. H. Bull	4-9-0
4-6	Diagram: Sig. Gen. 40 MC.	Physics VCohen	M. H. Bull	4-10-0
4-6	Nuclear Magnetic Resonance Shifts in Metals.	Physics VCohen	M. H. Bull	4-11-0
4-6	Diagram.	Reactor Kunstadter	M. H. Bull	4-12-0 & 4-13-0
4-7	Fig. 2 - From Neon 1, 2, 3, 4, 5, 6 to Trays A1, A2, A3, A4, A5, A6 respect-ively.	Physics McMahon	C. Lee	4-14-0

Date	Caption	Dept.	Photographer	Number
4-7	Rat Blood Volume by the Dye Dilution Method.	Biology Sharpe	C. Lee	4-15-0
4-7	Mean Blood Volume of the Rat.	Sharpe	C. Lee	4-16-0
4-7	Mean Blood Volume of Organs and Tissue of Maximally Bled or Perfused Rats by The Tagged Cell Dilution Technique.	Biology Sharpe	C. Lee	4-17-0
4-3	Strip of monitoring film from E-2 regular lighting.	HPhysics	Monsta.	4-18-0
4-3	Strip of monitoring film from E-2 side lighting test.	HPhysics	Monsta.	4-19-0
4-6	R. F. oscillating coil for Cosmotron.	Cosmo Pressman	R. J. Walton	4-20-0 & 4-21-0
4-5	Front view of Tandem Cloud Chamber showing mirrors of cameras.	ClCham. Cornish	R. F. Smith	4-22-0
4-5	Rear view of Tandem Cloud Chamber.	ClCham. Cornish	R. F. Smith	4-23-0
4-5	Side aperture of oblong cloud chamber	ClCham. Cornish	R. F. Smith	4-24-0
4-5	Oblong Cloud Chamber. 3/4 top view.	ClCham. Cornish	R. F. Smith	4-25-0
4-5	Oblong Cloud Chamber. front view.	ClCham. Cornish	R. F. Smith	4-26-0
4-7	Front View. Section A-A.	Physics TGWalsh	M. H. Bull	4-27-0
4-10	Schematic Diagram of Ten Channel Proportional Counter.	Elect. O'Neill	M. Herbert	4-28-0

Date	Caption	Dept.	Photographer	Number
4-7	Heat exchanges on roof of Cosmotron building.	Cosmo AWise	R. J. Walton	4-29-0
4-7	Multisphere on roof of Cosmotron.	Cosmo	R. J. Walton	4-30-0
4-7	Flywheel shafts set on bearings.	Cosmo AWise	R. J. Walton	4-31-0 & 4-32-0
4-11	Tracks: Plate No -96.	Physics Salant	P. Bennett	4-33-0
4-11	Tracks: Plate QI - 121.	Physics Salant	P. Bennett	4-34-0
4-11	Energy n Stars: Number of Heavy Prongs vs. Number of Stars.	Physics Salant	P. Bennett	4-35-0
4-11	$\overline{H} \rightarrow$ vs. $\overline{m} \rightarrow$	Salant	P. Bennett	4-36-0
4-11	____Stars with less than three light tracks. ----Stars with equal to or more than three light tracks.	Physics Salant	P. Bennett	4-37-0
4-11	P Stars. Number of Heavy Prongs vs. Number of Stars.	Physics Salant	P. Bennett	4-38-0
4-11	Grain count per hundred microns vs. number of tracks.	Physics Salant	P. Bennett	4-39-0
4-11	Black Stars Number of Stars vs. Number of Heavy Prongs.	Physics Salant	P. Bennett	4-40-0
4-11	Plate Lo -20.	Salant	P. Bennett	4-41-0
4-12	Sample pulses of bursts in an ionization chamber.	Physics McMahon	P. Bennett	4-42-0
4-12	Figure 1.	Physics Shutt	P. Bennett	4-43-0

Date	Caption	Dept.	Photographer	Number
4-12	Figure 2.	Shutt Physics	P. Bennett	4-44-0
4-12	Figure 3. H_M Oersted vs. B_M Gauss.	Shutt Physics	P. Bennett	4-45-0
4-12	Figure 4. H Gauss.	Physics Shutt	P. Bennett	4-46-0
4-13	Illustration of specific activity (s.a.) time relations of precursor A and product B.	Medical VanSlyke	C. Lee	4-47-0
4-13	The distribution of plasma's I^* in the normal and hypophysectomized rat.	Medical VanSlyke	C. Lee	4-48-0
4-13	Nuclear activity as a fraction of tissue activity.	Medical VanSlyke	C. Lee	4-49-0
4-13	Time in days vs. atom percent N^{15}.	VanSlyke	C. Lee	4-50-0
4-13	N^{15} concentration in hemin after feeding N^{15} - labeled glycine for three days.	Medical VanSlyke	C. Lee	4-51-0
4-12	Hours after injection vs. Relative specific activity.	Biology JSachs	C. Lee	4-52-0 thru 4-55-0
4-13	Copy from Cold Spring Harbor Symposia on Quantitative Biology, Volume XIII, p. 178.	Medical VanSlyke	C. Lee	4-56-0
4-13	Radioactive Isotopes most used in physiology, diagnosis, or therapy.	Medical VanSlyke	C. Lee	4-57-0
4-13	Thallium Exchange. 30^oC. u = 3.	Chemistry Dodson	C. Lee	4-58-0
4-13	CeIV Order in $HClO_4$.	Dodson	C. Lee	4-59-0

Date	Caption	Dept.	Photographer	Number
4-13	Reaction Order.	Chemistry Dodson	C. Lee	4-60-0
4-13	Cerium Exchange in $HClO_4$.	Chemistry Dodson	C. Lee	4-61-0
4-13	Effect of Complexes on Rate.	Chemistry Dodson	C. Lee	4-62-0
4-13	Empirical Rate Equations for Cerium Exchange.	Chemistry Dodson	C. Lee	4-63-0
4-13	Energy and Entropy of Activation.	Dodson	C. Lee	4-64-0
4-10	Photomicrographs of Mollusks. Neg. Mag. 18.3 X Print Mag. 36.6 X.	Geology LWeiss	R. F. Smith	4-65-0 thru 4-77-0
4-14	Cancer patient in the hospital.	Medical WMiller	Smith & Walton	4-78-0 and 4-79-0
4-13	Coil for Cosmotron frequency modulating oscillator.	Cosmo Pressman	R. F. Smith	4-80-0
4-17	Quantitative Analysis of PNA in Trillium Pollen Mother Cells during Meiosis; Steele's Modification of Schneider's Method.	Biology Moses	M. H. Bull	4-81-0
4-17	Energy Loss vs. Energy. Beryllium Foil (8.7×10^{-3} cm) Total Enrgy in Mev (includes rest energy) vs. $\frac{\Delta E}{\Delta S}$ in $\frac{\text{Mev.}}{\text{cm.}}$	Physics Goudsmit	M. H. Bull	4-82-0
4-17	Energy Loss vs. Energy Silver Foils (0.489×10^{-3} cm 0.998×10^{-3} cm).	Physics Goudsmit	M. H. Bull	4-83-0

Date	Caption	Dept.	Photographer	Number
4-17	Ag 0.998 x 10^{-3} cm. # Counts vs. Position.	Physics Goudsmit	M. H. Bull	4-84-0
4-17	Copy of X-Ray.	Goudsmit	M. H. Bull	4-85-0
4-14	Installing plastic strips with gap adjusting nuts in Cosmotron magnet.	Cosmo Moore	R. J. Walton	4-86-0
4-13	Photographs taken by Mr. Garfield at Brush Beryllium in Luckey, Ohio.	A.E.C.	J. F. Garfield	4-87-0 thru 4-112-0
4-15	Photographs taken on Visitors' Day, April 15, 1950:			
4-15	Biology Exhibit.	AUI JBurt	R. J. Walton	4-113-0
4-15	Start of tour; loading buses.	JBurt	R. J. Walton	4-114-0
4-15	Cyclotron.	JBurt	R. J. Walton	4-115-0
4-15	At the Van de Graaff.	JBurt	R. J. Walton	4-116-0
4-15	At the Cosmotron.	JBurt	R J. Walton	4-117-0
4-18	Automatic Plateau Counter - front view.	Elect. Prentky	R. J. Walton	4-118-0
4-18	Automatic Plateau Counter - close-up of gear arrangement.	Elect. Prentky	R. J. Walton	4-119-0
4-17	Radiated Potatoes.	Biology Sparrow	R. F. Smith	4-120-0 thru 4-124-0
4-19	Remote pipetting set-up.	Biology BRubin	R. J. Walton	4-125-0 thru 4-127-0

Date	Caption	Dept.	Photographer	Number
4-19	External radiation chamber.	Biology BRubin	R. J. Walton	4-128-0 thru 4-130-0
4-19	Recording Turbidimeter.	BRubin	R. J. Walton	4-131-0
4-19	Isotope concentration set-up and manipulating devices.	Biology BRubin	R. J. Walton	4-132-0
4-20	Table I. I All Dimensions $>$ R: II. Some Dimensions $<$ R; Others $>$ R III. All Dimensions $<$ R.	Physics PRichards	C. Lee	4-133-0
4-20	R, H/C vs.	Physics DHughes	C. Lee	4-134-0
4-20	Figure 6. AIB and AI-B. Number of trays discharged vs. Number of Events.	Physics McMahon	C. Lee	4-135-0
4-20	Figure 5. Relative Pulse Height P/Palpha vs. AIB Counting Rate (min^{-1}).	Physics McMahon	C Lee	4-136-0
4-20	Figure 3. Atmospheric Depth (gcm^{-2}) vs. Counting Rate (min^{-1}).	Physics McMahon	C. Lee	4-137-0
4-20	Figure 7. AIB and AI-B Cos vs. Counting Rate (min^{-1}).	Physics McMahon	C. Lee	4-138-0
4-20	Hot Experiment in Progress.	JBurt AUI	P. Simack	4-139-0
4-20	Danger- Radiation.	JBurt AUI	P. Simack	4-140-0
4-20	Clean Area - Obtain permission before bringing in any active substances or artieles which might be contaminated.	AUI JBurt	P. Simack	4-141-0

Date	Caption	Dept.	Photographer	Number
4-21	Electron Momentum 1.0 = 766 H vs. Scale 8 per minute.	Physics Alburger	C. Lee	4-142-0
4-21	Absorption Thicknesses (L) and Latitude Effects.	Physics McMahon	C. Lee	4-143-0
4-24	Percent of Pulses of alpha, sigma, and nu Shape.	Physics McMahon	M. H. Bull	4-144-0
4-24	Experimental Points. H vs. N/H	Physics Alburger	M. H. Bull	4-145-0
4-24	Number of Heavy Prongs vs. Multiplicity min. Tracks.	Physics Salant	M. H. Bull	4-146-0
4-24	Distribution of Heavy Prongs vs Number of Events.	Physics Salant	M. H. Bull	4-147-0
4-24	Number of Heavy Prongs vs. Number of Events.	Physics Salant	M. H. Bull	4-148-0
4-24	Mean Multiplicities $\bar{\bar{m}}$ of minimum Tracks from Proton Stars.	Physics Salant	M. H. Bull	4-149-0
4-24	Fractional Distribution, f, of Heavy Prongs in Proton-Induced Stars.	Physics Salant	M H. Bull	4-150-0
4-24	Minnesota. Stars with Outgoing Minimum Tracks.	Physics Salant	M. H. Bull	4-151-0
4-24	Copy from offset page in Area Survey Manual, BNL 1-8. Map of Area Survey Stations-	HPHysics MWeiss	M. H. Bull	4-152-0
4-24	H = Number of Heavy Prongs vs. Number of Stars.	Physics Salant	C. Lee	4-153-0
4-21	Uranium slugs - before and after test.	Reactor Tucker	R. J. Walton	4-154-0 and 4-155-0

Date	Caption	Dept.	Photographer	Number
4-25	Mean Multiplicities, $\overline{M}$, of Minimum Tracks from Proton-Induced Stars.	Physics Salant	C. Lee	4-156-0
4-25	Mean Number of Heavy Prongs vs. Multipliciyt of Minimum Tracks.	Physics Salant	C. Lee	4-157-0
4-24	Aerovane Transmittor.	Met. Mazzarella	R. J. Walton	4-158-0
4-24	Anemometer.	Met. Mazzarella	R. J. Walton	4-159-0
4-24	Instrument shelter interior.	Met. Mazzarella	R. J. Walton	4-160-0
4-24	Instrument shelter.	Met. Mazaarella	R. J. Walton	4-161-0
4-24	Eight inch rain gage.	Mazzarella	R. J. Walton	4-162-0
4-24	Meteorology Recorder Panel.	Mazzarella	R. J. Walton	4-163-0
4-24	Barometers.	Mazzarella	R. J. Walton	4-164-0
4-24	Sling psychrometer.	Mazzarella	R. J. Walton	4-165-0
4-22	Post Mortem.	Medical Madden	Garfield & Christoffersen	4-166-0
4-22	Post Mortem-	Medical Madden	Garifeld & Christoffersen	4-167-0
4-22	Post Mortem.	Medical Madden	Garfield & Christoffersen	4-168-0
4-22	Post Mortem.	Medical Madden	Garfield & Christoffersen	4-169-0 & 4-170-0
4-25	Weather Map.	Mazzarella Met.	M. H. Bull	4-171-0

4-26	A technician in the Medical Department at BNL using a Van Slyke gas machine. The machine is useful in analyzing body fluids and tissues for various compounds, among which is carbon. Using a method recently devised by Dr. Donald D. Van Slyke, it has become possible for the first time to measure the total carbon in a' tissue and the fraction which is radioactive and to carry out these analyses serially on a single sample of minute size. Dr. Van Slyke, formerly a member of the Rockefeller Institute for Medical Research, is now assistant director for BNL's laboratory for medicine and Biology.	Medical LFarr	JFG & RFS	4-178-0

Date	Caption	Dept.	Photographer	Number
4-20	Photo shows the loving care received by the inmates of the children's ward in the BNL hospital. Here a nurse is telling her 2 1/2 year old patient a bed-time story.	Medical LFarr	R. F. Smith	4-172-0 thru 4-174-0
4-21	Mice injected with the Yellow Fever virus are frozen in test tubes. The virus remains in a dormant stage within the body cells of the mouse enabling the scientist studying the disease to maintain an isolated source of pathogenic organisms.	Medical LFarr	R. F. Smith	4-175-0
4-26	Mrs. Lamb, head dietician, checkign outgoing trays in the BNL hospital kitchen.	Medical LFarr	J. F. Garfield & R. F. Smith	4-176-0 and 4-177-0
4-26	Technician working with a Van Slyke machine in the Bio-chemistry lab of the medical department.	Medical LFarr	J. F. Garfield & R. F. Smith	4-178-0
4-26	Using a geiger counter on the throat of thyroid patient in the BNL hospital.	Medical LFarr	J. F. Garfield & R. F. Smith	4-179-0
4-26	Mrs. Preits, thyroid case at BNL hospital.	Medical LFarr	J. F. Garfield & R. F. Smith	4-180-0 & 4-181-0
4-26	Miss Miner, occupational therapist at the BNL hospital, instructing some of the patients in the wood-working shop.	Medical LFarr	J. F. Garfield & R. F. Smith	4-182-0
4-26	Nurse ~~feeding patient~~ too weak to ~~take nourishment herself~~.	Medical LFarr	R. F. Smith	4-183-0 * thru 4-185-0 *
4-28	Electron Momentum 1.0 = 766 H_p vs. Scale 8 per minute. K - 803; L - 803.	Physics Alburger	P. Bennett	4-186-0

* Deleted July 19, 1950 per Dr. Lee Farr.

Date	Caption	Dept.	Photographer	Number
4-28	Decay of 374 Kev. State og Pb^{204}. Decay Scheme for Pb^{204}.	Physics Sunyar	P. Bennett	4-187-0
4-26	Simulated disaster, part of training program for Civilian Defense trainees.	HPhysics	R. F. Smith	4-188-0 thru 4-197-0
4-26	Fire in furnace of Calibration Laboratory.	Electron	R. J. Walton	4-198-0
4-28	$C_2D_4H_2$ - 1.2% $C_2D_3H_3$ - 4.7	Chemistry Turkevich	C. Lee	4-199-0
4-28	Equation: $\frac{d(C_2H_6)}{dt}$	Turkevich Chemistry	C. Lee	4-200-0
4-28	2 D_2 : 1 C_2H_4 at 90°C. reacted to 20% addition to the double bond.	Chemistry Turkevich	C. Lee	4-201-0
4-28	m/e; C_2D_6; C_2D_5H; $C_2D_4H_2$; $C_2D_3H_3$; $C_2D_2H_4$.	Chemistry Turkevich	C. Lee	4-202-0
4-28	m/e; C_2D_4, C_2D_3H; $C_2D_2H_2$; C_2DH_3; C_2H_4.	Chemistry Turkevich	C. Lee	4-203-0
4-28	m/e; C_2DH_5; C_2H_6. Exp.	Chemistry Turkevich	C. Lee 4-20	4-204-0
4-28	Figure 4 - Beam Current vs. Time on 4-27-49.	Chemistry Miskel	P. Bennett	4-205-0
4-28	Figure 10 - Effect of Sample Position on Counting Rate.	Chemistry Miskel	P. Bennett	4-206-0
4-28	Figure 13 - Excitation Function for Se^{82} (d,2n) Br^{82}.	Chemistry Miskel	P. Bennett	4-208-0
4-28	Figure 2 - Bombardment Chamber.	Miskel Chemistry	P. Bennett	4-207-0

Date	Caption	Dept.	Photographer	Number
4-28	Figure 3 - Cyclotron Slit System.	Miskel Chemistry	P. Bennett	4-209-0
4-28	Figure 1.	Electron O'Neill	P. Bennett	4-210-0
4-28	Figure 2.	Electron O'Neill	P. Bennett	4-211-0
4-28	Figure 3.	Electron O'Neill	P. Bennett	4-212-0
4-28	Schematic of Automatic Plateau scanner.	Electron O'Neill (Prentky)	P. Bennett	4-213-0
4-26	Simulated Disaster, part of training program for Civilian Defense trainees.	HPhysics	J. F. Garfield	4-214-0 thru 4-220-0
4-26	Pulse Height (Volts) vs. Channel Counting Rate (Arbitrary Units).	Chemistry Perlman	P. Simack	4-221-0
4-26	F-K Plot of Ni^{57} $Beta^{+}$ Spectrum-	Chemistry Perlman	P. Simack	4-222-0
4-26	Co^{57} and Ni^{57}.	Chemistry Perlman	P. Simack	4-223-0
4-26	Channel Position (Volts) vs. Channel Rate/Input Rate.	Chemistry Perlman	P. Simack	4-224-0
4-27	Main instrument panel for the Cyclotron.	Cyclo. Merkle	R. J. Walton	4-225-0
4-27	Motor generator room in the Cyclotron building.	Cyclo. Merkle	R. J. Walton	4-226-0
4-27	Inside of Dee Stabilizer control panel for Cyclotron.	Cyclo. Merkle	R. J. Walton	4-227-0
4-27	Inside of Arc Anode supply panel for Cyclotron.	Cyclo. Merkle	R. J. Walton	4-228-0

Date	Caption	Dept.	Photographer	Number
4-27	Interior back of control panel for Cyclotron Dee Stabilizer.	Cyclo. Merkle	R. J. Walton	4-229-0
4-27	Interior of Arc Filament supply for Cyclotron.	Cyclo. Merkle	R. J. Walton	4-230-0
4-27	Combined instrument panel for Arc Filament supply, Arc Anode supply, and Dee Stabilizer.	Cyclo. Merkle	R. J. Walton	4-231-0
4-27	Through open door of screen cage, view of 150 KV deflector supply (power), Transformer, and two KC-4 rectifier tubes.	Cyclo. Merkle	R. J. Walton	4-232-0
4-26	Simulated Disaster: part of training program for Civilian Defense trainees.	HPhysics	J. F. Garfield	4-233-0 thru 4-247-0
4-4	Slide No. A-2562-E B 237	Biology Sparrow	R.F. Smith	4-248-0
4-4	Slide No. A-2562-E A 236	Sparrow	R.F. Smith	4-249-0

May

Date	Caption	Dept.	Photographer	Number
5-1	Sum of Ethylene Concentrations vs. Slope of C_2DH_5 vs. Slope of $C_2H_4D_2$.	Chem. Turkevich	M. H. Bull	5-1-0
5-1	Sum of Ethylene Concentrations vs. Slope of $C_2\#H_6$.	Chem. Turkevich	M. H. Bull	5-2-0
5-2	Topographic map of area between 5th and 6th Avenues.	HPhysics Cowan	H. Maile	5-3-0
5-3	Table: Thickness E_d (Mev) Relative Yield of (d,2n) Reaction.	Chem. Miskel	H. Maile	5-4-0
5-2	X-ray machine with external radiation chamber.	Biol. BRubin	R. J. Walton	5-5-0
5-2	Overall photograph of cavity for periscope equipment on hot cell.	Reactor Strickland	R. J. Walton	5-6-0 & 5-7-0
5-2	Vertical carrier for periscope in hot cell.	Reactor Strickland	R. J. Walton	5-8-0
5-2	Base plate for vertical carrier rods - Hot cell periscope.	Reactor Strickland	R. J. Walton	5-9-0
5-4	Front View Section S-S.	Physics TWalsh	H. Maile	5-10-0
5-5	Photomicrograph of oil particles from Meteorology smoke run generator taken on 4/8/50. Taken with field optics using near ultra-violet wave length 3600 mu. Neg. Mag. 1660X.	Met. Bohnhorst	R. F. Smith	5-11-0
5-5	Photomicrograph of oil particles from Meteorology smoke generator taken on 4/12/50. Phase optics. Mag. 1850X on neg.	Met. Bohnhorst	R. F. Smith	5-12-0 thru 5-14-0

Date	Caption	Dept.	Photographer	Number
5-5	Photomicrograph of oil particles from Metoerology smoke generator taken on 4/18/50. Bright field near ultra-violet light 3600 mu wave length. Neg. Mag. 1660X.	Met. Bohnhorst	R. F. Smith	5-15-0 and 5-16-0
5-5	Graduation of civilian group from Health Physics course.	Elect. Kuper	R. F.Smith	5-17-0 & 5-18-0
5-5	Photomicrograph of section of adrenal gland of rat. Neg. Mag. 210X.	Biol. Edelmann	R. F. Smith	5-19-0
5-5	Photomicrograph of cross section of adrenal gland of rat. Neg. Mag. 14.3X.	Biol. Edelmann	R. F. Smith	5-20-0
5-5	Macrophotograph of whole section of adrenal gland. Neg. Mag. 14.3X.	Biol. Edelmann	R. F. Smith	5-21-0
5-5	Macrophotograph of whole section of adrenal gland of rat. Neg. Mag. 14.3X.	Biol. Edelmann	R. F. Smith	5-22-0
5-4	Total serum bilirubin One minute serum bilirubin Days vs. Mg.% Serum bilirubin.	Med. Miller	C. Lee	5-23-0
5-4	Serum amylase in units per 100 cc. Days vs. Amylase units.	Med. Miller	C. Lee	5-24-0
5-5	Front view of 5000V. regulated D.C. supply.	Elect. Porter	R. J. Walton	5-25-0
5-5	Front view of curremt indicator and integrator.	Elect. Rankowitz	R. J. Walton	5-26-0
5-5	Front 3/4 view of current indicator and integrator.	Elect. Rankowitz	R. J. Walton	5-27-0
5-5	Bottom view of current indicator and integrator.	Elect. Rankowitz	R. J. Walton	5-28-0

Negative Number	Caption
5-34-0	Figure 18. Circulation pump for evaporator and heat exchanger.
5-35-0	Figure 14. Caustic supply. Supplies dilute caustic at constant pressure for continuous neutralization.
5-36-0	Figure 9. Lower sections of evaporator flash column and separating column.
5-37-0	Figure 11. Steam station.
5-38-0	Figure 15. Large drier discharge mechanism. Discharge valves, 70-gallon waste drums on electric cart, and drier feed and condensate pumps.
5-39-0	Figure 12. Valve control center for condensate receiving tanks.
5-40-0	Figure 17. Drum drier remote controls.
5-41-0	Figure 16. Large vacuum double-drum drier. Also slurry feed tank, condensate receiving tank, ejector, and condenser.
5-42-0	Figure 10. Control panel. Electrical and instrument control for evaporators and driers.
5-43-0	Figure 6. Evaporator storage tanks. General waste received directly from laboratories.
5-44-0	Figure 19. Hydraulic pump and steel condensate tank.
5-45-0	Figure 8. Upper sections of evaporator flash column and separating column.
5-46-0	Figure 13. Rotameter station, metering of waste and continuous neutralization.
5-47-0	Figure 7. Upper level, east evaporator bay. Ejector surface condenser, separating tank, main condenser, and upper portion of east flash column and separating column.

Date	Caption	Dept.	Photographer	Number
5/9/50	16 mm. movie film.	BRubin Biology	R. J. Walton	5-29-0
5/9	The portable "poppy" BF-3 is a neutron detector. It is used in the Pile, Cyclotron, and Hot Lab areas and detects alpha radiation or slow neutrons.	HPhysics	Walton & Smith	5-30-0 and 5-31-0
5/9	The victoreen 247 is a survey instrument for gamma detection.	HPhysics	Walton & Smith	5-32-0 & 5-33-0
5/9	<u>For Official Use Only</u>: Copies of photographs from Dr. G. E. McCullough Knowles Atomic Power Laboratory, Schnectady, New York.			
5/9	Evaporator for circulation pump and heat exchanger. Copy # 1076885.	Reactor Manowitz	C. Lee	5-34-0
5/9	Caustic supply. Copy # 1076882. Supplies dilute caustic at constant pressure or continuous neutralization.	Reactor Manowitz	C. Lee	5-35-0
5/9	Lower section of evaporator flash column and separating column. Copy # 1076884.	Reactor Manowitz	C. Lee	5-36-0
5/9	Steam station. Copy # 1076888.	Reactor Manowitz	C. Lee	5-37-0
5/9	Large Drier Discharge Mechanism. Discharge valves 70-gallon waste drums on on electric cart and drier feed and condensate pumps. Copy # ~~1076892~~- 1076893.	Reactor Manowitz	C. Lee	5-38-0
5/9	Valve control center for condensate receiving tanks. Copy # 1076887.	Reactor Manowitz	C. Lee	5-39-0
5/9	Drum drier remote controls. Copy # 1076891.	Reactor Manowitz	C. Lee	5-40-0
5/9	Large vacuum double drum drier. Also slurry feed tank, condensate receiving tank, ejector and condenser. Copy # 1076890.	Reactor Manowitz	C. Lee	5-41-0

Date	Caption	Dept.	Photographer	Number
5/9	Electrical and instrument control for evaporators and driers. Cppy # 1076880.	Reactor Manowitz	C. Lee	5-42-0
5/9	Evaporator storage tanks - general waste received directly from labs. Copy # 1076879.	Reactor Manowitz	C. Lee	5-43-0
5/9	Hydraulic pump and steam condensate tank. Copy # 1076889.	Reactor Manowitz	C. Lee	5-44-0
5/9	Upper sections of evaporator flash column and separating column. Copy # 1076883.	Reactor Manowitz	C. Lee	5-45-0
5/9	Rotameter station metering of waste and continuous neutralization. Copy # 1076881.	Reactor Manowitz	C. Lee	5-46-0
5/9	Upper level - east evaporator aby. Ejector surface condenser, separating tank, main condenser and upper portion of east flash column and separating column. Copy # 1076886.	Reactor Manowitz	C. Lee	5-47-0
5/5	Counter-balance for periscope on hot cell.	Reactor Strickland	R. J. Walton	5-48-0
5/5	Periscope mount for hot cell.	Reactor Strickland	R. J. Walton	5-49-0
5/10	Right front of wrecked company car.	Bergin Transport.	R. J. Walton	5-50-0
5/10	Oxidation-Reduction mechanism for the decomposition of Ammonium Nitrate.	Chem. Bigeleisen	M. H. Bull	5-51-0
5/10	Mass Spectrometer analysis of N_2O prepared from 8% $N^{15}H_4N^{14}O_3$.	Chem. Bigeleisen	M. H. Bull	5-52-0
5/10	Distribution of O^{18} between N_2O and H_2O in the decompesition of Ammonium Nitrate.	Chem. Bigeleisen	M. H. Bull	5-53-0
5/10	Dehydration mechanism for the decomposition of Ammonium Nitrate.	Chem. Bigeleisen	M. H. Bull	5-54-0

Date	Caption	Dept.	Photographer	Number
5/10	Isotopic Compsotion of N_2O and H_2O vs. Amount of Reaction.	Chem. Bigeleisen	M. H. Bull	5-55-0
5/10	Determination of O^{18}/O^{18} in H_2O.	Bigeleisen	M. H. Bull	5-56-0
5/10	N_2O^{18}/N_2O^{16} vs. Amount of Reaction.	Bigeleisen	M. H. Bull	5-57-0
5/10	Steady State Approximation.	Chem. Bigeleisen	M. H. Bull	5-58-0
5/10	Theoretical equations for the distribution of O^{18} between N_2O and H_2O and the isotopic composition of N_2O vs. Time.	Chem. Bigeleisen	M. H. Bull	5-59-0
5/10	Determination of O^{18}/O^{16} in N_2O.	Bigeleisen	M. H. Bull	5-60-0
5/10	Analysis of Nitrates for O^{18}.	Bigeleisen	M. H. Bull	5-61-0
5/10	Isotopic Analysis of N_2O and H_2O formed in the decomposition of Ammonium Nitrate.	Chem. Bigeleisen	M. H. Bull	5-62-0
5/50	Wilbur Kelly.	Portrait	J. F. Garfield	5-63-0
5/11	Resonance Shifts. (Dickinson).	Phys. VCohen	P. Simack	5-64-0
5/11	Resonance Shifts. (Proctor and Yu).	Physics VWCohen	P. Simack	5-65-0
5/50	Wilbur Kelly.	Portrait	J. F. Garfield	5-66-0
5/11	Dr Haworth receiving the National Safety Award.	Pub. Ed. JBurt	J. F. Garfield	5-67-0
5/11	Growth of E. coli (B) in P^{32} Plotted with automatic turbidimeter. Actual time in hours vs. Optical density (x3).	Biology BRubin	P. Simack	5-68-0
5/11	Growth of E. coli (B) in P^{32} Plotted with automatic turbidimeter. Actual time in hours vs. Optical Density.	Biology BRubin	P. Simack	5-69-0

Date	Caption	Dept.	Photographer	Number
5/11	Effect og P^{32} on lag of E.coli B and B/r. Activity - (millicuries per ml of P^{32}) vs. Time (hours).	Biolggy BRubin	P. Simack	5-70-0
5/11	Mutations of E.coli B/r after growth in X-ray beam (5000r per hour for 10 hours) Subcultures (3 generations).	Biolggy BRubin	P. Simack	5-71-0
5/11	Logarithmic phase of E.coli (B) in P^{32}. (Exp. 94). Actual time in hours vs. Optical Density.	Biology BRubin	P. Simack	5-72-0
5/11	Propane - d 12/17/49. Wave length in cm^{-1} Wave length in microns Percent transmission.	Chemistry Thompson	M. H. Bull	5-73-0
5/11	Hydrocarbon Liquid Hydrogenated 7/20/48.	Chemistry Thompson	M. H. Bull	5-74-0
5/11	Composite: Deuteron Carbon - 11/17/48 Normalized Deutero Carbon Liquid-1/6/50 Hydrogenated Normalized Deutero Caron Liquid - 1/13/50.	Chemistry Thompson	M. H. Bull	5-75-0
5/11	Butane - d 12/17/49.	Chemistry Thompson	M. H. Bull	5-76-0
5/8	Foraminiferers Neg. Mag. 46X to 290X.	Geology LWeiss	R. F. Smith	5-77-0 thru 5-112-0
5/11	Syringe Separator.	Chemistry Medalia	M. H. Bull	5-113-0
5/12	Schematic Drawing. 1. Reactor 2. Trap at dry ice temperature, etc.	Chemistry Thompson	M. H. Bull	5-114-0

Date	Caption	Dept.	Photographer	Number
5/12	Observed multiplicity of shower particles vs. Number of proton-indaced stars.	Physics Salant	P. Bennett	5-115-0
5/15	Copy of Cloud Chamber Photographs.	Biology JSacks	C. Lee	5-116-0 and 5-117-0
5/15	$T_{1/2}$ equals 44 plus or minus 4 sec. Seconds vs. 1 minus $x/x_{infinity}$.	Chemistry RDodson	P. Bennett	5-118-0
5/15	Graphs. Hours after injection vs. Relative specific activity.	Biology JSacks	P. Bennett	5-119-0 and 5-120-0
5/15	Copy from Photosynthesis in Plants: p. 400, Table 19.4. Degradation of Photosynthetic Products.	Biology MGibbs	P. Bennnett	5-121-0
5/15	Copy from Distribution of Labeled Carbon in Plant Sugars after a short period of Photosynthesis in $C^{14}O_2$, p. 499.	Biology MGibbs	P. Bennett	5-122-0
5/15 ~~Feb.,-1950~~	Copy from Archives of Biochemistry, Feb., 1950, p. 285. Table V. Distribution of Labeling in the Active Compounds.	Biology MGibbs	P. Bennett	5-123-0
5/15	X-ray negatives of graphite.	Reactor WWarner	Reactor	5-124-0 thru 5-126-0
5/16	Figure 1 - Distribution of Energy for Beta Particles from a Radioactive Isotope.	HPhysics FCowan	H. Maile	5-127-0
5/16	Figure 2 - Fraction of Incident Beta Particles Passing Through Various Thickness of Shielding Material.	HPhysics FCowan	H. Maile	5-128-0
5/16	Control panel for cartridge compressing machine.	Reactor WWarner	R. J. Walton	5-129-0
5/17	Diagram of apparatus.	Chemistry Turkevich	Princeton	5-130-0

Date	Caption	Dept.	Photographer	Number
5-15	View of semi-hot cave in the Hot Lab at BNL, used in handling moderately radioactive materials. This picture shows a test run. The operator pushes control buttons of mechanism by which chemical equipment introduced through steel doors (below) is moved into position in the cave. In an actual experiment, additional shielding will be placed between the equipment and the operator who will watch his work in the panel mirror above the bench.	Reactor LStang	R. J. Walton	5-138-0
5-15 2	A technician in the Hot Lab at BNL operating a lift truck be remote control. With it he will place a panel of pre-assembled apparatus in a "hot cell". The equipments have been tested in a "dry run" and is now ready to be used in actual experiments in the "hot cell". Scientists and technicians operate the equipment by remote control instruments outside the heavy steel doors and watch their work through periscopes. By mounting the apparatus on a mobile panel, all equipment can be pre-assembled and pre-tested as a complete unit in another room before placement in the cell. Similarly, it can be removed as a unit to a spedial room for decontamination after use. Thus, no time is lost between experiments in the cell itself. Chemical processing can be performed at a very high level of radioactivity equivalent to 50 curies of two-million electron-volt gamma rays.	Reactor LStang	R. J. Walton	5-139-0
5-15	Part of the equipment in the staff machine shop of the Hot Lab/ This shop supllements the general machine shop which serves all departments at BNL and makes special equipment for scientific experiments which it would not be economical to buy commercially in small lots.	Reactor LStang	R. J. Walton	5-140-0 and 5-141-0

Date	Caption	Dept.	Photographer	Number
5-17	Graph. Scale - 0 to 10.0 both axes.	Chemistry Turkevich	Princeton	5-131-0 and 5-132-0
5-17	Two Meteorology weather vanes.	Met. Mazzarella	Meteorology	5-133-0
5-16	Observed Multiplicity of Showers Particles. Areas of all Histograms Normalized to Area of Solid Graph, Figure 1a.	Physics Salant	H. Maile	5-134-0
5-17	Degradation of Alanine.	Biology MGibbs	H. Maile	5-135-0
5-17	Diagram of breakdown of H, O, and C combinations into sucrose.	Biology MGibbs	H. Maile	5-136-0
5-17	Degradation of Malic Acid.	Biology MGibbs	H. Maile	5-137-0
5-15	James Sutton working with control unit for equipment carrier in semi-hot cell.	Reactor LStang	R. J. Walton	5-138-0
5-15	Remotely controlled finger lift in operation setting panel on hot cell.	Reactor LStang	R. J. Walton	5-139-0
5-15	Two general views of hot lab machine shop.	Reactor LStang	R. J. Walton	5-140-0 and 5-141-0
5-15	General view of hot lab work laboratory showing filters.	Reactor LStang	R. J. Walton	5-142-0
5-17	Rear view - R.F. oscillator control panel containing RF oscillator, saturation amplifier, pump and motor control, oil-bath, modulation winding power supply, and power supply for saturation amplifier.	Cosmo Moore	R. J. Walton	5-143-0

Date	Caption	Dept.	Photographer	Number
5-17	Power amplifier chassis.	Cosmo WMoore	R. J. Walton	5-144-0
5-17	First stages of power amplifier.	Cosmo WMoore	R. J. Walton	5-145-0
5-17	Cathometer for accurately locating search coils in the gap of magnet model #7.	Cosmo WMoore	R. J. Walton	5-146-0
5-17	Winding coil on jig in preparation for mounting on Cosmotron.	Cosmo WMoore	R. J. Walton	5-147-0
5-17	Close-up view of end of coil during winding operation.	Cosmo WMoore	R. J. Walton	5-148-0
5-17	Measuring inside of magnet gap with an inside micrometer.	Cosmo WMoore	R. J. Walton	5-149-0
5-17	Experimental pole face windings on gap of magnet model #7.	Cosmo WMoore	R. J. Walton	5-150-0
5-17	Tightening N supports on spreader bars between quadrant ends of magnet.	Cosmo WMoore	R. J. Walton	5-151-0
5-17	Measuring the individual radii of magnet blocks.	Cosmo WMoore	R. J. Walton	5-152-0
5-17	Micrometer arrangement for measuring depth of magnet gap.	Cosmo WMoore	R. J. Walton	5-153-0
5-17	Tightening side jacks between magnet blocks.	Cosmo WMoore	R. J. Walton	5-154-0
5-17	Spreader bars between ends of magnet quadrants.	Cosmo WMoore	R. J. Walton	5-155-0
5-17	Surveyor's tape used for locating front face of magnet blocks.	Cosmo WMoore	R. J. Walton	5-156-0
5-17	Detail of spreader bays ends.	Cosmo WMoore	R. J. Walton	5-157-0

Date	Caption	Dept.	Photographer	Number
5-17	Search coil inside of experimental model of vacuum chamber in magnet model #7.	Cosmo WMoore	R. J. Walton	5-158-0
5-17	Leveling the marble slab in the experimental vacuum chamber preparatory to magnetic measurements.	Cosmo WMoore	R. J. Walton	5-159-0
5-17	Front view - R.F. oscillator control panel containing RF oscillator, saturation amplifier, pump and motor control, oil-bath, modulation winding power supply, and power supply for saturation amplifier.	Cosmo WMoore	R. J. Walton	5-160-0
5-18	Diagram. To Manometer. To Pumping Station.	Chemistry Bigeleisen	P. Bennett	5-161-0
5-19	Figure 5. E vs. x E = Alpha Energy. X = A - 5/2 Z.	Reactor IKaplan	M. H. Bull	5-162-0
5-19	Figure 4. Uranium Family.	Reactor IKaplan	M. H. Bull	5-163-0
5-19	Figure 3. Thorium Family.	Reactor IKaplan	M. H. Bull	5-164-0
5-19	Figure 2. Log λ vs. 1/V A - 2Z constant. λ = Disintegration constant. V = Alpha Velocity. A - 2Z = Neutron Excess.	Reactor IKaplan	M. H. Bull	5-165-0
5-19	Figure 1. Log λ vs. 1/V, Z constant. λ = Disintegration constant. V = Alpha Velocity- Even - Even Alpha Emitters.	Reactor IKaplan	M. H. Bull	5-166-0

Date	Caption	Dept.	Photographer	Number
5-19	Figure 9. Logλ vs. 1/V, Z constant. Even-Odd Nuclides. X = Uranium. O = Thorium.	Reactor IKaplan	M. H. Bull	5-167-0
5-19	Figure 8. U vs. E. E = Alpha Energy. U = Interval Potential.	Reactor IKaplan	M. H. Bull	5-168-0
5-19	Figure 7. E vs. Z, A - 2Z constant. E = Alpha - Energy Z = Atomic Number. A-2Z = Neutron Excess.	Reactor IKaplan	M. H. Bull	5-169%0
5-19	Figure 6. Logλ vs. X λ = Disintegration constant. X = A - 5/2 Z.	Reactor IKaplan	M. H. Bull	5-170-0
5-18	Two million volts Van de Graaff generator in the Chemistyy labs.	Chemistry	R. F. Smith	5-171-0
5-18	Dr. Everett R. Johnson shown with the Chemistry Department's "baby" Van de Graaff generator housed in a bullet-shaped steel pressure tank only 5 feet long and 3 feet in diameter. The two million electron-volt "rifle" produces high energy electrons or cathode rays, and also can generate X-rays. The machine, built by the High Voltage Engineering Corporation of Cambridge, Massachusetts, is used to produce new information on break-up, re-combin-ation and distribution among types of molecules. Experiments will also be made on prteins and other complex living substances. Materials of tech-nological interest will be tested for ability to stand up under radiation.	Chemistry	R. F. Smith	5-172-0 and 5-173-0
5-19	Temperature vs. Reciprocal Molar Susceptibility.	Chemistry LCorliss	M. H. Bull	5-181-0 and 5-182-0

Date	Caption	Dept.	Photographer	Number
5-19	Mol Percent MnF_2 vs. Curie Temperature.	Chemistry LCorliss	M. H. Bull	5-183-0
5-19	Diagram of method of feeding plants liquid nutrients.	Biology VBowen	H. Maile	5-184-0
5-22	Star tracks for Dr. Salant in Physics:			
5-22	Plate QI-131.	Salant	P. Bennett	5-185-0
5-22	Plate #QPI 226.	Salant	P. Bennett	5-186-0
5-22	Plate K -63.	Salant	P. Bennett	5-187-0
5-22	Plate M 249.	Salant	P. Bennett	5-188-0
5-22	Plate L -22.	Salant	P. Bennett	5-189-0
5-22	Time (seconds) vs. Residual Activity (Arbitrary Units).	Chemistry JMiskel	P. Simack	5-190-0
5-23	Ni^{57} process to Co^{57}.	Chemistry Perlman	C. Lee	5-191-0
5-23	Diagram of External Radiation Chamber.	Biology BRubin	C. Lee	5-192-0
5-23	Diagram of Section thru Agitator.	Biology BRubin	C. Lee	5-193-0
5-23	Diagram of Absorption Turbidimeter.	Biology BRubin	C. Lee	5-194-0
5-23	Diagram of Top View.	Biology BRubin	C. Lee	5-195-0
5-23	Figure 2. 1. Reactor. 2. Trap at Dry Ice Temperature, 3. Trap at Liquid Air Temperature; etc.	Thompson Chemistry	C. Lee	5-196-0

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5-23	R.T. ♀ 55 years. Percent dose retained 96 hours.	Medical LFarr	C. Lee	5-197-0
5-23	L.P. ♀ 66 years Percent dose retained 96 hours.	Medical LFarr	C. Lee	5-198-0
5-23	F.M. ♀ 15 years Percent dose retained 96 hours.	Medical LFarr	C. Lee	5-199-0
5-23	D.K. ♀ 14 years Percent dose retianed 96 hours.	Medical LFarr	C. Lee	5-200-0
5-24	Photomicrograph of star tracks without background.	Physcis Salant	R. F. Smith	5-201-0
5-24	Photomicrograph of star tracks with background. Vertical broom - print with broom down.	Physics Salant	R. F. Smith	5-202-0
5-23	Overall view of the electrical analogue.1	Reactor WPage	R. J. Walton	5-203-0
5-23	Simulated air flow test for the Pile.	Reactor WPage	R. J. Walton	5-204-0
5-24	Composite of three graphs - figures 1, 2, and 3. Negative in M. Herbert's possession. Job #762.	Physics IBernstein	M. Herbert	5-205-0
5-18	Trillium colony established by BNL Biology Department.	Biology ASparrow	J. F. Garfield	5-206-0

Date	Caption	Dept.	Photographer	Number
5-24	External Radiation Chamber Assembly.	Biology BRubin	J. F. Garfield	5-207-0
5-26	Star tracks. Plate K -63.	Physics Salant	C. Lee	5-208-0
5-26	Star tracks. Plate QI - 131.	Physics Salant	C. Lee	5-209-0 & 5-210-0
5-26	Star tracks. Plate L -20.	Physics Salant	C. Lee	5-211-0
5-50	Eisenbud. (N.Y.A.E.C.)	Portrait	J. F. Garfield	5-212-0 & 5-213-0
5-29	Growth of E. coli 6A (Sd) as a function streptomycin concentration.	Biology BRubin	C. Lee	5-214-0
5-29	Complete growth of E. coli 7A in 3 media comparing streptomycins/	Biology BRubin	C. Lee	5-215-0
5-29	Growth of E. coli in Brain Heart infusion containing Hayden Streptomycin.	Biology BRubin	C. Lee	5-216-0
5-29	Complete growth of E. coli 375 in 3 media comparing streptomycins.	Biology BRubin	C. Lee	5-217-0
5-29	Growth oif E. coli 6A in Brain Heart infusion containing Parke-Davis Streptomycin.	Biology BRubin	C. Lee	5-218-0
5-29	Complete growth of E. coli 6A in 3 media comparing Streptomycins.	Biology BRubin	C. Lee	5-219-0
5-29	4 hour growth of E. coli 6A comparing streptomycins.	Biology BRubin	C. Lee	5-220-0
5-29	$4\frac{1}{2}$ hour growth of E. coli 7A comparing streptomycins.	Biology BRubin	C. Lee	5-221-0
5-29	Growth rate of E. coli 6A (SD) as a function of streptomycin concentration.	Biology BRubin	C. Lee	5-222-0
5-29	E. coli 6A.	BRubin	C. Lee	5-223-0
5-29	Poisson distributions as a function of P_0.	Biology BRubin	C. Lee	5-224-0

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5-29	Mutations per 10^{10} cell divisions. (E. coli B/r).	Biology BRubin	C. Lee	5-225-0
5-29	Base plate and supporting beams for rectifying units.	Cosmo AWise	R. J. Walton	5-226-0
5-29	Electricians joining terminal wires running to motor generator.	Cosmo AWise	R. J. Walton	5-227-0
5-29	Conduits connected to buss bar of motor generator.	Cosmo AWise	R. J. Walton	5-228-0
5-29	Taken of the underside of motor generator showing the terminal wires running to the motor.	Cosmo AWise	R. J. Walton	5-229-0
5-29	Wire supporting trays under floor of motor generator room. These wires run to control panels set up in the MG room.	Cosmo AWise	R. J. Walton	5-230-0
5-29	Absolute intensities found by various workers. (Ethane 3000 cm^{-1}).	Chemistry JAmick	C. Lee	5-231-0
5-29	Absolute intensities of Hydrocarbons C-H's (Gas phase).	Chemistry JAmick	C. Lee	5-232-0
5-29	Absolute intensities of Hydrocarbon C-H's (in CCl_4 solution).	Chemistry JAmick	C. Lee	5-233-0
5-29	Absorption area vs. pressure isomeric pentanes. The C-H band at 3000 cm^{-1} (Gas phase).	Chemistry JAmick	C. Lee	5-234-0
5-29	Absorption area vs. pressure isomeric pentanes. The C-H band at 3000 cm^{-1}. (in CCl_4 solution).	Chemistry JAmick	C. Lee	5-235-0
5-29	Absorption area vs. pressure Ethane C-H; 3000 cm^{-1} (Gas phase).	Chemistry JAmick	C. Lee	5-236-0
5-29	Figure 5. Ionization constant vs. Stoichiometric concentration.	Reactor LGoldring	Phil. Bennett	5-237-0
5-26	External Irradiation Chamber in Rotation.	Biology BRubin	J. F. Garfield	5-238-0 thru 5-240-0
-25	Console and main control panels for Cyclotron.	Cyclo.	Smith & Walton	5-241-0

Date	Caption	Dept.	Photographer	Number
5-25	West corridor of the Cyclotron Builfing	Cyclo.	Smith & Walton	5-242-0
5-25	Van de Graaff generaotr room.	VandeGraaff	Smith & Walton	5-243-0
5-25	Machine shop - general view.	Cyclo.	Smith & Walton	5-244-0
5-25	Cyclotron vault.	Cyclo.	Smith & Walton	5-245-0
5-25	Main entry to the building, showing receptionist's desk, lobby.	Cyclo.	Smith & Walton	5-246-0
5-25	Work area for Cyclotron.	Cyclo.	Smith & Walton	5-247-0
5-25	Lobby entrance and corridor leading to machine shop.	Cyclo.	Smith & Walton	5-248-0
5-?	Trillium as grown in the Biology plantation.	Biology Sparrow	Garfield	5-249-0
5-?	Trillium as grown in the Biology plantation.	Biology Sparrow	Garfield	5-250-0
5-?	Trillium as grown in the Biology plantation.	Biology Sparrow	Garfield	5-251-0
5-?	Trillium as grown in the Biology plantation.	Biology Sparrow	Garfield	5-252-0
5-?	Trillium as grown in the Biology plantation.	Biology Sparrow	Garfield	5-253-0
5-5	Slide No. A-2802-J (C) 240	Sparrow	R.F. Smith	5-254-0
5-5	Slide No. A-2802-J (B) 239	Sparrow	R.F. Smith	5-255-0
5-5	Slide No. A-2802-J (A) 238	Sparrow	R.F. Smith	5-256-0
5-5	Slide No. A-2802-J (D) 241	Sparrow	R.F. Smith	5-257-0
5-5	Slide No. A-2802-J (E) 242	Sparrow	R.F. Smith	5-258-0
5-5	Slide No. A-2802-J (F) 243	Sparrow	R.F. Smith	5-259-0
5-29	Slide No. A-3214-E 244	Sparrow	R.F. Smith	5-260-0

June

Date	Caption	2 Dept.	Photographer	Number
6-2	Ta le I - p-stars distributions, H > 2.	Physics Salant	M. H. Bull	6-1-0
6-2	Table II - Collision Multiplicities $\bar{m}_o$.	Physics Salant	M. H. Bull	6-2-0
6-2	Table III - Shower Multiplicities $\bar{m}_1$	Salant	M. H. Bull	6-3-0
6-1	Ignition assembly being set up in place in the MG room.	Cosmo AWise	R. J. Walton	6-4-0
6-1	Ignition assembly being set in place in the MG room.	Cosmo AWise	R. J. Walton	6-5-0
6-2	Anode balance coil assembly.	AWise	R. J. Walton	6-6-0
6-2	Transformer on south side of the Cosmotron.	Cosmo AWise	R. J. Walton	6-7-0
6-5	Table: Source; Sggar; Organism; Carbons 1,6; Carbons 2,5; Carbons 3,4.	Biology MGibbs	H. Maile	6-8-0
6-5	Dark fixation of $C^{14}O_2$. Figures represent percentages of C^{14} in the various carbon atoms.	Biology MGibbs	H. Maile	6-9-0
6-5	Sunflower leaf plus $C^{14}O_2$.	MGibbs	H. Maile	6-10-0
Degrad 6-5	Degradation of Synthetic Isotopic Lactate.	Biology MGibbs	H. Maile	6-11-0
6-5	Degradation of Synthetic Alanine-2-C^{14}.	Biology MGibbs	H. Maile	6-12-0
6-5	Degradation of Photo-synthetic Products Sunflower.	Biology MGibbs	H. Maile	6-13-0
6-1	Close-up of ear of corn on corn grass plant.	Biology Singleton	R. F. Smith	6-14-0
6-1	Corn grass plant grown in the Biology greenhouse.	Biology Singleton	R. F. Smith	6-15-0
6-1	Photograph of chin injury for the Medical Department.	Medical	R. F. Smith	6-16-0
6-3	Side view of counting stage and tube.	Physics GJohnson	R. F. Smith	6-17-0
6-3	3/4 view of counting stage and tube.	Physics GJohnson	R. F. Smith	6-18-0

Date	Caption	Dept.	Photographer	Number
6-3	General view of counting equipment used by Dr. G. Johnson in his study of crystal formations on metal surfaces.	Physics GJohnson	R. F. Smith	6-19-0
6-5	Plastic panel for vacuum chamber.	Cosmo IPolk	R. J. Walton	6-20-0
6-7	Degradation of products synthesized in weak light.	Biology MGibbs	H. Maile	6-21-0
6-7	Degradation of products synthesized during photoreduction.	Biology MGibbs	H. Maile	6-22-0
6-7	Air view of Health Physics radiation field.	HPhysics DBalber	R. J. Walton	6-23-0
6-7	Air view of Health Physics radiation	HPHysics		
6-7	Aerial view of fields at BNL used in experiments to determine the effects of radioactivity on growing plants. In the center of the hexagonal field, left, is mounted a cobalt source of radiation. Corn, millet, tobacco, tradescantia and other plants are planted on concentric circles around the source. The nearer they are, the greater is the probability of radiation affecting their growth, fertility, and genetic behavior. The big field, right, is used for growing corn to be pollenated by pollen from the hexagon field in genetic tests. This field also contains plants grown from pollen irradiated last year at BNL.	Biology Christensen	R. J. Walton	6-25-0
6-7	Copy from book for slide.	Physics SGoudsmit	H. Maile	6-32-0
6-8	Photomicrographs of Microfossils.	Geology LWeiss	R. F. Smith	6-33-0 thru 6-44-0
6-8	Phtotgraphs of Reactor Building Grounds.	AP & PM EHunter	E. J. Hunter	6-45-0 thru 6-52-0
6-8	Differential probability, etc.	Physics IBernstein	H. Maile	6-53-0

Date	Caption	Dept.	Photographer	Number
6-8	Dr. Everett R. Johnson, chemist at BNL sealing a bulb which will contain a sample, in this case a solution of potassium bromide. The sample will be bombarded by high energy electrons from a small Van de Graaff generator, or "atomic rifle".	Chemistry	R. F. Smith	6-132-0
6-8	Close-up of welding of flask.	Chemistry	R. F. Smith	6-133-0 and 6-134-0
6-8	Dr. Merritt. (AEC)	Portrait	J. F. Garfield	6-135-0
6-13	Phase photomicrograph of oil particles from Meteorology smoke run - stage 2. Neg. Mag. 2200X P Print Mag. 4500X.	Meteor. Bohnhorst	R. F. Smith	6-136-0
6-13	Phase photomicrograph of oil particles from Meteorology smoke generator - stage 3. Neg. Mag. 2200X Print Mag. 4500X.	Meteor. Bohnhorst	R. F. Smith	6-137-0

Date	Caption	Dept.	Photographer	Number
6-13	Phase Photomicrograph of oil particles from Meteorology smoke generator - stage 4. Neg.Mag. 2,200 X PrintMag. 4,500 X.	Meteor. Bohnhorst	R. F. Smith	6-138-0
6-13	Phase Photomicrograph of oil particles from Meteorology smoke generator - stage 4. Neg.Mag. 77 X PrintM g. 154 X.	Meteor. Bohnhorst	R. F. Smith	6-139-0 and 6-140-0
6-15	Ultra-violet Photomicrograph of oil drops from Meteorology smoke generator. Neg.Mag. 1240 X PrintMag. 2500 X. (Note: Negative located in the safe).	Meteorology Bohnhorst	R. F. Smith	6-141-0
June	Radioautographs.	HPhysics SHarris	S. Harris	6-142-0 & 6-143-0
6-19	Schematic of Anti-Coincidence Circuit.	Electronics FO'Neill	M. H. Bull	6-144-0
6-19	Graph: Theta in minutes vs. Intensity.	Physics DHughes	P. Bennett	6-145-0
6-19	Diagram: Direct beam with mirror and shield.	Physics DHughesq	P. Bennett	6-146-0
6-14	Details of crating in cloud chamber trailer.	ClChamber ARoesch	J. F. Garfield	6-147-0 thru 6-149-0
6-19	Cosmotron Injector Inflector in General M chine Shop.	Cosmo	R. F. Smith	6-150-0
6-15	Overall of Cosmotron vault.	Cosmo WMoore	R. J. Walton	6-151-0
6-20	Copy from: <u>Radiations from Radioactive Substances</u>, plate IX. Figure 2 - Collision of alpha particle with helium atom.	Biology JSachs	C. Lee	6-152-0

Date	Caption	Dept.	Photographer	Number
6-21	Mirror Angle, Minutes vs. Intensity.	Physics DHughes	Charles Lee	6-153-0
6-21	Including Res. and Spill/	Physics DHughes	Charles Lee	6-154-0
6-21	Diagram: Magnets, etc. (Coils not shown. See fig. 1).	Physics DHughes	Charles Lee	6-155-0
6-12	Detail shots of waste pump.	Reactor RPowell	R. J. Walton	6-156-0 thru 6-163-0
6-22	Copy of aerial photograph. 9-23-47; ASA-4D-143.	AEC Stubbings	M. H. Bull	6-164-0
6-22	Copy of aerial photograph. 9-23-47; ASA-4D-142/	AEC Stubbings	M. H. Bull	6-165-0
6-22	Copy of aerial photograph. 9-23-47; ASA-4D-126.	AEC Stubbings	M. H. Bull	6-166-0
6022	Copy of aerial photograph. 9-23-47; ASA-4D-125.	AEC Stubbings	M. H. Bull	6-167-0
6-20	Trillium Rhizome. Control.	Biology Sparrow	R. F. Smith	6-168-0
6-20	Trillium Rhizome. A-2807 8XKV.	Biology Sparrow	R. F. Smith	6-169-0
6-20	Trillium Rhizome. A-2711 CHK.	Biology Sparrow	R. F. Smith	6-170-0
6-20	Trillium Rhizome. A-2740 CH.	Biology Sparrow	R. F. Smith	6-171-0 ~~6-171~~
6-20	Trillium Rhizome. A-2802 C.	Biology Sparrow	R. F. Smith	6-172-0
6-20	Trillium Rhizome. A-2798 CH.	Biology Sparrow	R. F. Smith	6-173-0

Date	Caption	Dept.	Photographer	Number
6-20	Trillium Rhizome. A-2681 XCHK 50R.	Biology Sparrow	R. F. Smith	6-174-0
6-20	Trillium Rhizome. A-2603 CHK.	Biology Sparrow	R. F. Smith	6-175-0
6-20	Trillium Rhizome. A-2633 XCK 50R. 2	Biology Sparrow	R. F. Smith	6-176-0
6-20	Trillium Rhizome A-2675-C.	Biology Sparrow	R. F. Smith	6-177-0
6-20	Trillium Rhizome. A-2866.	Biology Sparrow	R. F. Smith	6-178-0
6-20	Trillium Rhizome. A-2644 XCK 50R.	Biology Sparrow	R. F. Smith	6-179-0
6-23	Copy negative of Mr. Murray, Atomic Energy Commissioner.	(Portrait) JBurt	M. H. Bull	6-180-0
6-22	Lily plant in Biology greenhouse. 28L300.	Biology Sparrow	R. F. Smith	6-181-0
6-22	Lily plant in Biology greenhouse. 28L301.	Biology Sparrow	R. F. Smith	6-182-0
6-22	Lily plant in Biology greenhouse. 28L302.	Biology Sparrow	R. F. Smith	6-183-0
6-22	Lily plant in Biology greenhouse. 28L303.	Biology Sparrow	R. F. Smith	6-184-0
6-22	Lily plant in Biology greenhouse. 28L304.	Biology Sparrow	R. F. Smith	6-185-0
6-22	Lily plants in Biology greenhouse. 28L305.	Biology Sparrow	R. F. Smith	6-186-0
6-22	Lily plant in Biology greenhouse. 28L306.	Biology Sparrow	R. F. Smith	6-187-0
6-22	Lily plant in Biology greenhouse. 28L307.	Biology Sparrow	R. F. Smith	6-188-0

Date	Caption	Dept.	Photographer	Number
6-22	Entrance to Cyclotron Building.	Cyclo.	R. F. Smith	6-189-0 and 6-190-0
6-23	General view of the Cosmotron vault.	Cosmo.	R. J. Walton	6-191-0
6-26	Sampler-Holdup System for Dilute Wastes at BNL.	HPhysics FCowan	P. Simack	6-192-0
6-26	BNL Sewage Processing and Monitoring System.	HPhysics FCowan	P. Simack	6-193-0
6-26	Figure 24. Two Trebler Samplers, one with and one without a time clock control.	HPhysics FCowan	P. Simack	6-194-0
6-23	Measurements for the location of "Sky Hooks" for vacuum chamber.	Cosmo. WMoore	R. J. Walton	6-195-0
6-26	Tobacco plants in the radiation field Showing effects of radiation.	Biology Singleton	R. F. Smith	6-196-0
6-26	Spontaneous mutation of daisies found on the lab site.	Biology Sparrow	R. F. Smith	6-197-0 thru 6-200-0
6-26	Tradescantia plants in radiation field.	Biology Sparrow	R. F. Smith	6-201-0 thru 6-204-0
6-27	He^3 (d,p) He^4 Proton Yield at Zero Degrees.	Reactor VSailor	Charles Lee	6-205-0
6-27	Angular Variation of Proton Yield He^3 (d,p) He^4.	Reactor VSailor	Charles Lee	6-206-0
6-27	Apparatus for Observing Protons from He^3 (d,p) He^4.	Reactor VSailor	Charles Lee	6-207-0
6-27	Graphs: Plasma P, Liver Inorganic P, L bile of ATP-ADP, Glucose-1-P, Glucose-6-P.	Biology JSacks	Charles Lee	6-208-0 and 6-209-0

Date	Caption	Dept.	Photographer	Number
6-26	Reciprocal Hydrogen-Ion Concentration, f^{-1} vs. Rate Constant k, $f^{-1}hr.^{-1}$.	Chemistry Harbottle	P. Simack	6-210-0
6-26	Wavelength mu vs. Optical Debsity.	Chemistry Harbottle	P. Simack	6-211-0
6-26	Minutes vs. $1-x/x_{infinity}$.	Chemistry Harbottle	P. Simack	6-212-0
6-26	Perchloric acid mols/liter vs. Rate Constant k, f^{-1} $hr.^{-1}$.	Chemistry Harbottle	P. Simack	6-213-0
6-26	Milliliters of HCl vs. Volts.	Chemistry Harbottle	P. Simack	6-214-0
6-26	Hydrogen Ion Concentration Formal vs. Reciprocal Rate Constant, 1/k, fhr.	Chemistry Harbottle	P. Simack	6-215-0
6-26	1/(a plus b) curve "A" and 1/(a plus b) curve "B" vs. Half-times ("A") hours; ("B") minutes.	Chemistry Harbottle	P. Simack	6-216-0
6-26	Reciprocal Temperature $(^{o}A)^{-1}$ vs. $-\ln k_2$, f^{-1} $hr.^{-1}$.	Chemistry Harbottle	P. Simack	6-217-0
6-26	Wavelength mu vs. Optical ~~Denistty~~ Density.	Chemistry Harbottle	P. Simack	6-218-0
6-26	Log cl added vs. log k, $f^{-1}min^{-1}$.	Chemjsty Harbottle	P. Simack	6-219-0
6-27	Experimental potato field looking south.	Biology Sparrow	R. F. Smith	6-220-0
6-27	Experimental potato field. View looking southwest.	Biology Sparrow	R. F. Smith	6-221-0
6-27	Experimental plantings of Trillium in woods on site.	Biology Sparrow	R. F. Smith	6-222-0 thru 6-226-0
6-28	Copy from Radiology: Figure 2 - Opinions as to dasage required for various results.	Biology Sparrow	Charles Lee	6-227-0
6-28	Ion Accelerating Voltage vs. Relative Intensity.	Chemistry Schaeffer	Charles Lee	6-228-0

Date	Caption	Dept.	Photographer	Number
6-27	Copy: Chemox (#812).	Safety JHannoch	P. Simack	6-229-0
6-27	Oopy: Demand Mask (#809).	Safety JHannoch	P. Simack	6-230-0
6-27	Copy: All service gas mask - Type S canister (#59).	Safety JHannoch	P. Simack	6-231-0
6-27	Copy: Comfo Cushion Respirator. (#432).	Safety JHannoch	P. Simack	6-232-0
6-27	Copy: Airline Respirator (#500).	Safety JHannoch	P. Simack	6-233-0
6-27	Copy: Maskfone with all service mask (#811)	Safety JHannoch	P. Simack	6-234-0
6-28	Installing first coil on southwest quadrant.	Cosmo WMoore	R. J. Walton	6-235-0
June	Various views from the Meteorology tower.	Meteor. Bohnhorst	Meteorology	6-236-0 thru 6-249-0
6-28	Figure 1 - Absorption Spectrum of CeIV in INH_2SO_4.	Chemistry AMedalia	Charles Lee	6-250-0
6-28	Figure 2 - Absorption Spectra of CeIV in 6N and 0.1 NH_2SO_4.	AMedalia Chemistry	Charles Lee	6-251-0
6-28	Figure 3 - Absorption Spectra of Ammonium Persulfate in 1 NH_2SO_4.	AMedalia Chemistry	Charles Lee	6-252-0
6-28	Figure 4 - Absorption Spectra of Potassium Nitrate (0.0101 M).	AMedalia Chemistry	Charles Lee	6-253-0
6-28	Figure 5 - Extinction vs. Concentration of Cerium taken in recommended procedure.	AMedalia Chemistry	Charles Lee	6-254-0
6-28	Figure 6 - Extinction at 320 mu vs. Time of Boiling.	AMedalia Chemistry	Charles Lee	6-255-0
6-28	Figure 7 - Absorption Spectra of Various compounds in the ultraviolet.	AMedalia Chemistry	Charles Lee	6-256-0 & 6-257-0
6-29	Anemometer test stand.	Meteor. Bohnhorst	R. J. Walton	6-258-0

Date	Caption	Dept.	Photographer	Number
6-7	Slide No. A-2564-E (B) 246	Biology Sparrow	R.F. Smith	6-259-0
6-7	Slide No. A-2564-E (A) 245		R.F. Smith	6-260-0
6-8	Slide No. A-2564-E (D) 248	Sparrow	R.F. Smith	6-261-0
6-8	Slide No. A-2564-E (C) 247	Sparrow	R.F. Smith	6-262-0

July

Date	Caption	Dept.	Photographer	Number
7-50	PM of Magnesium 100-200 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-1-0
7-50	PM of Silicon 200-325 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-2-0
7-50	PM of Bismuth 100-200 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-3-0
7-50	PM of Titanium 200-325 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-4-0
7-50	PM of Silicon 100-200 mesh Neg.Mag. 38X Print Mag. 76X	Physics RWeiss	R. F Smith	7-5-0
7-50	PM of Nickel 200-325 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-6-0
7-50	PM of Graphite 200-325 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-7-0
7-50	PM of Tantalum 200-325 mesh Neg.Mag. 38x Print Mag. 76X.	Physics RWeiss	R. Smith	7-8-0
7-50	PM of Iron 200-325 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-9-0
7-50	PM of Bismuth 200-325 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-10-0
7-50	PM of Tellurium 200-400 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-11-0

Date	Caption	Dept.	Photographer	Number
7-50	PM of Columbium 200-325 mesh Neg.Mag. 38X Print Mag. 76X	Physics RWeiss	R. F. Smith	7-12-0
7-50	PM of Copper 100-200 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-13-0
7-50	PM of 200-325 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-14-0
7-50	PM of Iron Neg.Mag. 38X Print Mag. 76X. 100-200 mesh.	Physics RWeiss	R. F. Smith	7-15-0
7-50	PM of Titanium 100-200 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-16-0
7-50	PM of 100-400 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-17-0
7-50	PM of Palladium 200-325 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-18-0
7-50	PM of Tellurium 200-325 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-19-0
7-50	PM of Bismuth 300 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-20-0
7-50	PM of Copper 200-325 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-21-0
7-50	PM of Vanadium 200-325 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-22-0

Date	Caption	Dept.	Photographer	Number
7-50	PM of Titanium 325 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-23-0
7-50	PM of Chromium 200-325 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-24-0
7-50	PM of Antimony 200-325 mesh Neg.Mag. 38X Print Mag. 76X.	Physics RWeiss	R. F. Smith	7-25-0
7-50	PM of Silicon 400 mesh Neg. Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-26-0
7-50	PM of Antimony Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-27-0
7-50	PM of Selenium Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-28-0
7-50	PM of Lead Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-29-0
7-50	PM of Bismuth 400-450 mesh Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-30-0
7-50	PM of Tungsten Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-31-0
7-50	PM of Silicon 325-400 mesh Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-32-0
7-50	PM of Silicon Fine mesh Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-33-0

Date	Caption	Dept.	Photographer	Number
7-50	PM of Tellurium 400 mesh Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-34-0
7-50	PM of Tellurium 300 mesh Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-35-0
7-50	PM of Silicon 100 mehh Neg.Mag. 155X Print Mag. 310X.	Physics Rweiss	R. F. Smith	7-36-0
7-50	PM of Columbium 325-400 mesh Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-37-0
7-50	PM of Tellurium 400 mesh Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F.Smith	7-38-0
-50	PM of Manganese 400 mesh Neg.Mag. 155X. Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-39-0
7-50	PM of Bismuth 325-400 mesh Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-40-0
7-50	PM of Molybdenum 200 and finer mesh Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-41-0
7-50	PM of Titanium 400 mesh Neg. Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-42-0
7-50	PM of Ruthenium Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-43-0
7-50	PM of Vanadium 325-400 mesh Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-44-0

Date	Caption	Dept.	Photographer	Number
7-50	PM of Iron 325 mesh Neg. Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-45-0
7-50	PM of Bismuth Very fine mesh Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-46-0
7-50	PM of Arsenic Neg. Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	7-47-0
7-7	Dr. Gerald Tape.	Portrait	R. F. Smith	7-48-0
7-7	Dr. Gerald Tape.	Portrait	R. F. Smith	7-49-0
7-7	Stage Irradiated. Stage(s) Scored.	Biology Sparrow	H. Maile	7-50-0
7-7	Amount of Rejoining Following Irradiation at MetaphaseI and Interphase in <u>Trillium</u>.	Biology Sparrow	H. Maile	7-51-0
7-7	Chromosome Fragmentation by X-rays during meiosis.	Biology Sparrow	M. H. Bull ~~H. Maile~~	7-52-0
7-10	Graph. K equals $\frac{(HTO)}{(H_2O)} \frac{(H_2)}{(HT)}$ ⊙ Experimental Black and Taylor ---Theoretical.	Chemistry Bigeleisen	H. Maile	7-53-0
	NO NEGATIVES			7-54-0 and 7-55-0
7-5	Radiation field looking west.	Biology Sparrow	R. F. Smith	7-56-0
7-5	Radiation field looking southeast.	Biology Sparrow	R. F. Smith	7-57-0
7-10	Quantitative determination of desoxpentose and pentose nucleic acids in <u>Trillium</u> pollen mother cells during meiosis; Steele's modification of Schneider's method.	Biology MMoses	M. H. Bull	7-58-0

Date	Caption	Dept.	Photographer	Number
-12	Schematic of Mass Spectrograph with Inner wall of vacuum chamber, Ion source, Pulser, and Detector (Multiplier).	Physics LGSmith	M. H. Bull	7-59-0
7-11	Diagram Pulses.	Reactor Columbia JBRosen	P. Simackq	7-60-0
7-11	Graph. $\frac{w}{k}$ vs. Y_R in units of k_1.	Reactor Columbia JBRosen	P. Simack	7-61-0
7-11	Graph Beta r_o vs. H_1 and H_2 H_1 (Br_o) equals $\dfrac{\sinh(2B_{r_o}) \text{ plus } \sin(2B_{r_o})}{\cosh(2B_{r_o}) \text{ minus } \cos(2B_{r_o})}$ H $H_2(B_{r_o})$ equals $\dfrac{B_{r_o}(\sinh(2B_{r_o}) \text{ minus } \sin(2B_{r_o})}{\cosh(2B_{r_o}) \text{ minus } \cos(2B_{r_o})}.$	Reactor Columbia JBRosen	P. Simack	7-62-0
7-11	Copy. Figure 4 - Typical arrangement of equipment in gondola.	Cosmo MChiuchiolo	P. Simack	7-63-0
7-11	Copy. Figure 5 - Typical section of record of flight.	Cosmo MChiuchiolo	P. Simack	7-64-0
7-13	BNL Seal - A Center for Nuclear Research and Development.	Photo,	M. Herbert	7-65-0
7-14	Lucite corn seed radiation chamber. Container is so designed as to fit around pole containing radioactive cobalt in the gamma field.	Biology Singleton	R. F. Smith	7-66-0
7-14	Figure 2. Schematic of Interpolation Recording Scaler Timing Circuits.	Electronic JConstant	P. Simackq	7-67-0

Date	Caption	Dept.	Photographer	Number
7-14	Figure 3 - Schematic of Interpolation Recording Scaler.	Electronic JConstant	P. Simack	7-68-0
7-14	Diagram of Apparatus.	Med.-Biol. D.VanSlyke	H. Maile	7-69-0 thru 7-71-0
7-12	Apparatus for manufacturing Iodine P^{132}.	Reactor LStang	R. J. Walton	7-72-0 thru 7-80-0
7-13	Tradescantia plants in the gamma field.	Biology Sparrow	R. F. Smith	7-81-0
7-13	Tradescantia plants in the radiation field. View looking west.	Biology Sparrow	R. F. Smith	7-82-0
7-13	Tradescantia plants in the gamma field, looking west.	Biology Sparrow	R. F. Smith	7-83-0
7-13	Tradescantia plants in the radiation field, view looking northeast.	Biology Sparrow	R. F. Smith	7-84-0
7-17	Copy of Graph.	Physics MGoldhaber	M. H. Bull	7-85-0
7-17	Instrument Calibration Panel.	Cosmo JHare	R. J. Walton	7-86-0 and 7-87-0
7-13	Abraham Pressman.	Portrait	A. P. Christoff-ersen	7-88-0
7-14	Dr. John P. Blewett.	Portrait	A. P. Christoff-ersen	7-89-0
July	Views of 7- Meteorology Tower.	Meteorology Mazzarella	Meteorology	7-90-0 thru 7-92-0
July	Views of Meteorology Tower and Equipment.	Meteorology Mazzarella	Meteorology	7-93-0 thru 7-97-0

Date	Caption	Dept.	Photographer	Number
7-20	X-ray view of Particle Plate Camera with plates removed.	Physics Hornbostel	/ R. F. Smith	7-98-0
7-20	X-ray view Of Particle Plate Camera with plates in position.	Physics Hornbostel	R. F. Smith	7-99-0
7-18	Diagram - Figure 1.	Physics FPallas	H. Maile	7-100-0
7-18	Diagram - Figure 2.	Physics FPallas	H. Maile	7-101-0
7-18	Diagram - Figure 3.	Physics FPallas	H. Maile	7-102-0
7-20	Graph - Thiouracil 0.5 gm. q 8h.	Medical WMiller	M. H. Bull	7-103-0
7-21	Graph - Input volts vs. Output volts.	Cosmo APressman	M. H. Bull	7-104-0
7-24	Day vs. Specific Activity. 0.5 MG/KG I.P.; Duck S.A. x 10^4.	Biology RKlein	P. Simack	7-105-0
7-24	Day vs. Specific Activity. $G\frac{1}{4}X$ C & G, 1946; Rat Oral; Anemic 0.2 MG/KG.	Biology RKlein	P. Simack	7-106-0
7-24	Day vs. Specific Activity. C & G, 1946; Rat IP; 0.3 MG/KG,	Biology RKlein	P. Simack	7-107-0
7-21	Containers used to hold test tubes of radioactive materials during whirling process. Construction of containers is such as to keep test tubes from being shattered during this processing.	Biology BRubin	R. J. Walton	7-108-0
7-21	Tools used in working with radioactive materials.	Biology BRubin	R. J. Walton	7-109-0
7-21	Pipetting equipment for active materials.	Biology BRubin	R. J. Walton	7-110-0
7-21	Lucite holder for 25 ml. flasks.	Biology BRubin	R. J. Walton	7-111-0

Date	Caption	Dept.	Photographer	Number
7-21	Other instruments used in pipetting - these have been replaced by new and more up-to-date equipment pictured in #7-110-0.	Biology BRubin	R. J. Walton	7-112-0
7-21	Lucite rack for holding test tubes.	Biology BRubin	R. J. Walton	7-113-0
7-24	K-108 relay, front view, series resistors removed.	Cyclo. WMerkle	J. F. Garfield	7-114-0
7-24	K-108 relay, front view.	Cyclo. WMerkle	J. F. Garfield	7-115-0
7-24	K-108 relay, ultra close-up to show cross bar which failed in service.	Cyclo. WMerkle	J. F. Garfield	7-116-0
7-10	Copies from <u>Crystal Growth</u>.	Physics GJohnson	H. Maile	7-117-0 thru 7-119-0
7-20	Rear view of control unit for one of the Cosmotron vacuum pumps.	Cosmo FSeufert	R. J. Walton	7-120-0
7-20	Front view, with cover off to show wiring, of controls for Cosmotron vacuum pump.	Cosmo FSeufert	R. J. Walton	7-121-0
7-20	Putting final touches on control box for vacuum pump.	Cosmo FSeufert	R. J. Walton	7-122-0
7-20	Testing and aligning one of the Cosmotron vacuum pumps.	Cosmo FSeufert	R. J. Walton	7-123-0
7-20	Technician setting wire in place on jig board.	Cosmo FSeufert	R. J. Walton	7-124-0
7-20	Technician setting wiring correction on jig.	Cosmo FSeufert	R. J. Walton	7-125-0
7-21	Thermometer for Meteorology.	Meteor. Mazzarella	R. F. Smith	7-126-0
7-25	Log W vs. Log τ_{exp}.	Physics SDancoff	P. Simack	7-127-0

Date	Caption	Dept.	Photographer	Number
7-25	Table. Z, Element, A, kev, K to L ratio.	Physics SDancoff	P. Simack	7-128-0 7-228-0
7-25	Log W vs. Log $(\tau_\gamma \rho^{21})$.	Physics SDancoff	P. Simack	7-129-0
7-25	Log W vs. Log τ_γ	Physics SDancoff	P. Simack	7-130-0
7-25	Z equals 56; 1 equals 4.	Physics SDancoff	P. Simack	7-131-0
7-25	Radiation Lifetimes of Isomeric Levels.	Physics SDancoff	P. Simack	7-132-0
7-24	Ferrite blocks.	Cosmo MPlotkin	R. J. Walton	7-133-0
7-24	Lilies showing variation in growth due to radiation.	Biology ASparrow	R. F. Smith	7-134-0
7-24	Viewing box for Cosmotron.	Cosmo Cottingham	R. F. Smith	7-135-0
7-21	Parallel lens for Cosmotron in the machine shop.	Cosmo MPlotkin	R. F. Smith	7-136-0
7-24	Technician winding coil in Cosmotron laboratory.	Cosmo Cottingham	R. F. Smith	7-137-0
7-26	Diagram of Apparatus.	Biology RSteele	P. Simack	7-138-0 and 7-139-0
7-27	Graph Relation between weight of potatoes produced and distance from source.	Biology ASparrow	P. Bennett	7-140-0
7-25	ωt (0 - 2π) vs. $\frac{C}{C_o}$ (0 - 1.0).	Reactor Columbia BRosen	P. Simack	7-141-0
7-25	Ultraviolet Sterilization of Radioactive Solution.	Biology BRubin	P. Simack	7-142-0

Date	Caption	Dept.	Photographer	Number
7-25	Dilutions of a Bacterial Suspension in Beckman Spectrophotometer. (λ equals 600 $m\mu$).	Biology BRubin	P. Simack	7-143-0
7-25	Schematic Circuit Diagram of Recording Turbidimeter.	Biology BRubin	P. Simack	7-144-0
7-25	Sections of Charts.	Biology BRubin	P. Simack	7-145-0 and 7-146-0
7-26	Diagram - Li^8.	Physics WHornyak	P. Bennett	7-147-0
7-26	Diagram - O^{16}.	Physics WHornyak	P. Bennett	7-148-0
7-26	Diagram - O^{17}.	Physics WHornyak	P. Bennett	7-149-0
7-26	Diagram - N^{13}.	Physics WHornyak	P. Bennett	7-150-0
7-26	Diagram - B^{10}.	Physics WHornyak	P. Bennett	7-151-0
7-26	Diagram - C^{12}.	Physics WHornyak	P. Bennett	7-152-0
7-26	Diagram - N^{15}.	Physics WHornyak	P. Bennett	7-153-0
7-26	Diagram - N^{14}.	Physics WHornyak	P. Bennett	7-154-0
7-26	Diagram - B^{11}.	Physics WHornyak	P. Bennett	7-155-0
7-26	Diagram - C^{13}.	Physics WHornyak	P. Bennett	7-156-0
7-26	Diagram - Be^8.	Physics WHornyak	P. Bennett	7-157-0
7-26	Diagram - He^5.	Physics WHornyak	P. Bennett	7-158-0
7-26	Diagram - O^{18}.	Physics WHornyak	P. Bennett	7-159-0
7-26	Diagram - B^{12}.	Physics WHornyak	P. Bennett	7-160-0

Date	Caption	Dept.	Photographer	Number
7-26	Diagram - Be^9.	Physics WHornyak	P. Bennett	7-161-0
7-26	Diagram - C^{11}.	Physics WHornyak	P. Bennett	7-162-0
7-26	Diagram - F^{19}.	Physics WHornyak	P. Bennett	7-163-0
7-26	Diagram - N^{16}.	Physics WHornyak	P. Bennett	7-164-0
7-26	Diagram - F^{17}.	Physics WHornyak	P. Bennett	7-165-0
7-26	Diagram - He^6.	Physics WHornyak	P. Bennett	7-166-0
7-26	Diagram - O^{15}.	Physics WHornyak	P. Bennett	7-167-0
7-26	Diagram - C^{14}.	Physics WHornyak	P. Bennett	7-168-0
7-26	Diagram - Be^{10}.	Physics WHornyak	P. Bennett	7-169-0
7-26	Diagram - F^{20}.	Physics WHornyak	P. Bennett	7-170-0
7-26	Diagram - Ne^{20}.	Physics WHornyak	P. Bennett	7-171-0
7-26	Diagram - Ne^{21}.	Physics WHornyak	P. Bennett	7-172-0
7-26	Diagram - Li^6.	Physics WHornyak	P. Bennett	7-173-0
7-26	Diagram - Li^7; Be^7.	Physics WHornyak	P. Bennett	7-174-0
7-26	Diagram - F^{18}.	Physics WHornyak	P. Bennett	7-175-0
7-26	Diagram - Ne^{22}; Ne^{23}.	Physics WHornyak	P. Bennett	7-176-0
7-27	Effect of Temperature on Fixation of $Sr^{plus\ plus}$ Montmorillonite R-2472.	Reactor WGinell	P, Bennett	7-177-0

Date	Caption	Dept.	Photographer	Number
7-27	Effect of Temperature on Fixation of Srplus plus Fillers Earth.	Reactor WGinell	P. Bennett	7-178-0
7-27	Effect of Temperature on Fixation of Srplus plus Montmorillonite R-2532.	Reactor WGinell	P. Bennett	7-179-0
7-25	Table Behavior in Distribution Experiment.	Reactor WPage	P. Simack	7-180-0
7-25	Table Components of two phase melt.	Reactor WPage	P. Simack	7-181-0
7-25	Solubility of Sodium in salt phase of metal-salt systems as a function of the components of the metal phase.	Reactor WPage	P. Simack	7-182-0
7-26	Type D 1-3.9 mps.	Meteor. MSmith	M. H. Bull	7-183-0
7-26	Type A 1-3 mps.	Meteor. MSmith	M. H. Bull	7-184-0
7-26	Type D $\gtrsim$ 12 mps.	Meteor. MSmith	M. H. Bull	7-185-0
7-26	Highest off-site dose-rate in percent of operation level without regard to direction.	Meteor. MSmith	M. H. Bull	7-186-0
7-26	Type B_1 1-3.9 mps.	Meteor. MSmith	M. H. Bull	7-187-0
7-26	Type B_1 $\gtrsim$12 mps.	Meteor. MSmith	M. H. Bull	7-188-0
7-26	Percentage frequency of wind direction and off-site dose-rate. $\gtrsim$3.5 mr/week January-May 1950.	Meteor. MSmith	M. H. Bull	7-189-0
7-26	Type B_1 4-7.9 mps.	Meteor. MSmith	M. H. Bull	7-190-0
7-26	Type D 8-11.9 mps.	Meteor. MSmith	M. H. Bull	7-191-0
7-26	Type B_2 1-3.9 mps.	Meteor. MSmith	M. H. Bull	7-192-0

Date	Caption	Dept.	Photographer	Number
7-26	Type C 8-11.9 mps.	Meteor. MSmith	M. H. Bull	7-193-0
7-26	Type D 4-7.9 mps.	Meteor. MSmith	M. H. Bull	7-194-0
7-26	Type B_2 4-7.9 mps.	Meteor. MSmith	M. H. Bull	7-195-0
7-26	Type B_1 8-11.9 mps.	Meteor. MSmith	M. H. Bull	7-196-0
7-26	Type C 4-7.9 mps.	Meteor. MSmith	M. H. Bull	7-197-0
7-26	Type C 12 mps.	Meteor. MSmith	M. H. Bull	7-198-0
7-27	Aerial view of Radiation Field.	Biology RSingleton	R. J. Walton	7-199-0 and 7-200-0
7-27	Aerial View of Experimental Field.	Biology Christensen	R. J. Walton	7-201-0
7-27	Aerial view of area around the radiation field to show the location of Trillium patches.	Biology Christensen	R. J. Walton	7-202-0 and 7-203-0
7-27	Aerial view of Health Physics Radiation Field.	HPhysics DBalber	R. J. Walton	7-204-0 and 7-205-0
7-27	Aerial view of Medical Department.	Medical LFarr	R. J. Walton	7-206-0
7-28	Meson Spectrum Observed at 0^0 from P-P Collisions E_o equals 345 Mev.	UofCalif. Physics GChew	P. Simack	7-207-0
7-28	Angle in C.M. System vs. Cross Section/Steradian Photon Energy 253 Mev. in Lab system.	UofCalif. Physics GChew	P. Simack	7-208-0
7-28	Mev vs. x 10^{-30} cm^2 /Steradian Mev.	UofCalif, Physics GChew	P. Simack	7-209-0 and 7-210-0
28	Ratio fo Negative to Positive Meson Production Cross- Sections in Carbon.	UofCalif. Physics GChew	P. Simack	7-211-0

Date	Caption	Dept.	Photographer	Number
7-31	Summary of Potato Irradiation Experiments with X- and gamma-rays.	Biology ASparrow	P. Simack	7-212-0
7-31	Figure 1.	Chemistry Cornell SBauer	P. Simack	7-213-0
7-31	Figure 2. Velocity of gas along central stream line.	Chemistry Cornell SBauer	P. Simack	7-214-0
7-31	Figure 3. Fraction of N_2O_4 dissociated at various temperatures and total pressures.	Chemistry Cornell SBauer	P. Simack	7-215-0
7-31	Figure 4. P (total) m.m. vs. C" and C*.	Chemistry Cornell SBauer	P. Simack	7-216-0
7-31	Graph for Chemistry.	Chemistry Cornell SBauer	P. Simack	7-217-0
7p31	Figure 6. Diagram of Apparatus.	Chemistry Cornell SBauer	P. Simack	7-218-0
7-7	Slide No. A-889-C 249	Biology Sparrow	R.F. Smith	7-219-0
7-11	Slide No. A-2982-J 254	Sparrow	R.F. Smith	7-220-0
7-11	Slide No. A-2928-N 255	Sparrow	R.F. Smith	7-221-0
7-11	Slide No. A-2952-C (A) 250	Sparrow	R.F. Smith	7-222-0
7-11	Slide No. A-2952-C (B) 251	Sparrow	R.F. Smith	7-223-0
7-11	Slide No. A-2952-C (C) 252	Sparrow	R.F. Smith	7-224-0
7-11	Slide No. A-2952-S 257	Sparrow	R.F. Smith	7-225-0
7-11	Slide No. A-2791-G 253	Sparrow	R.F. Smith	7-226-0
7-11	Slide No. A-889 C 256	Sparrow	R.F. Smith	7-227-0
7-12	Slide No. A-172-F 258	Sparrow	R.F. Smith	7-228-0

August

Date	Caption	Dept.	Photographer	Number
8-1	Electron Momentum vs. Scale 8 per Minute.	Physics Alburger	P. Bennett	8-1-0
8-1	Electron Momentum - 1.0 equals 766Hρ vs. Scale 8 per Minute.	Physics Alburger	P. Bennett	8-2-0
8-2	Maynard Smith of Meteorology leaves the elevator of BNL's 420 foot weather tower after inspecting measurement instruments at one of the tower's eight levels.	Meteor.	J. F. Garfield	8-3-0
8-2	Maynard Smith of Meteorology analyzing a weather chart at the plotting table of BNL's Meteorology station. On the wall behind him are charts on which weather patterns for a given 6-hour period have been plotted.	Meteor.	J. F. Garfield	8-4-0 thru 8-6-0
8-2	Philip Lowry, Maynard Smith, and Daniel Mazzarella discuss the bi-directional wind vane which they invented for use on BNL's two weather towers. The instrument measures both the vertical and the horizontal direction of the wind.	Meteor.	J. F. Garfield	8-7-0 and 8-8-0
8-3	Collodial Gold.	Chemistry Turkevich	P. Bennett	8-9-0
8-3	Graphs for Slides.	Chemistry Turkevich	P. Bennett	8-10-0 thru 8-22-0
8-2	Figure 7. Diagram of Apparatus.	Chemistry Cornell SBauer	P. Simack	8-23-0
8-3	Table I. Dn; Vn; Vg; D calc.; D obs.; Deviation.	Chemistry Turkevich	P. Bennett	8-24-0
8-1	Pm of Bismuth 400 mesh Neg.Mag. 155X Print Mag. 310X.	Physics RWeiss	R. F. Smith	8-25-0

Date	Caption	Dept.	Photographer	Number
8-9	Valve spline. Internal spiral GM tube for liquid flow counting.	Reactor CRaseman	R. F. Smith	8-26-0
8-9	Forward Scattering. Right Angle Scattering.	Physics RKarplus	H. Maile	8-27-0
8-9	Depolarized Radiation .	Physics RKarplus	H. Maile	8-28-0
8-9	Circularly Polarized Radiation.	Physics RKarplus	H. Maile	8-29-0
8-9	Graph for slide.	Chemistry KSancier	H. Maile	8-30-0
8-9	Analysis Manometer.	Chemistry KSancier	H. Maile	8-31-0
8-9	Graphs for slides.	Chemistry KSancier	H. Maile	8-32-0 and 8-33-0
8-4	General view of equipment in study of ion exchange kinetics.	Reactor CRaseman	R. J. Walton	8-34-0
8-4	Valves and cam assembly in dry box.	Reactor CRaseman	R. J. Walton	8-35-0
8-4	Cam Assembly.	Reactor CRaseman	R. J. Walton	8-36-0
8-4	Ion exchange column and shielded GM tubes.	Reactor CRaseman	R. J. Walton	8-37-0
8-4	Geiger-Müller tube in shield.	Reactor CRaseman	R. J. Walton	8-38-0
8-10	Star track. (Print to check mark near end of the broom).	Physics ESalant	Charles Lee	8-39-0
8-9	Vacuum chambers lined up waiting to be installed on the Cosmotron.	Cosmo IPolk	R. J. Walton	8-40-0
8-9.	Vacuum chamber set-up.	Cosmo IPolk	R. J. Walton	8-41-0
8-9	Raceway around the Cosmotron.	Cosmo FSeufert	R. J. Walton	8-42-0

8-10	Patient entering radiation area of the atomic hospital at BNL to begin a long and hopeful fight to regain her health. The hospital uses radioactive substances in pioneering research techniques. In some instances, relatively large quantities of isotopes are used to control overgrowth of normal tissue or destroy invading cancer tissues. In others, relatively small quantities are used as tracers to establish diagnoses and to evaluate other treatments. The hospital is the first ever devoted exclusively to atomic medicine. Because of the large teams of physicians required in research medicine, the hospital limits sharply the number of its patients.	Medical LFarr	R. F. Smith	8-52-0

8-10

A geiger counter is the heart of this treatment being used at BNL. Its purpose is to determine the quantity of radioactive iodine which remains in the thyroid gland 24 hours after the iodine has been given in an "atomic cokktail". The radioactivity, or giving off of rays and nuclear particles, enables the physician to follow the travel of radioactive substances in the body.

Normal thyroid glands withdraw iodine from the blood to make the thyroid hormone. Thus, over-activity of the gland or cancer of the gland can be treated by substituting radioactive iodine for normal inert iodine. The radioactive iodine taken up in large quantities by thyroid cancer tissue destroys the cancer growth in that area.

The X on the throat enables the operator to set the machine a precise distance from the throat and always at the same angle by use of a measuring device not shown. Unless counts are made at an exactly known distance from the body, they cannot accurately be converted into quantity of radioactive iodine and their dose. The mark, which is a harmless ink, remains on the patient's skin for several days during which surveys and re-examination are done to be certain the iodine is remaining where it will do the most good,

The hospital is the first ever devoted exclusively to atomic medicine. Doctors and nurses already have pioneered research techniques with patients. Because of the large teams of physicians required in research medicine, the hospital limits sharply the number of its patients.

Medical
LFarr

R. F. Smith

8-56-0

Date	Caption	Dept.	Photographer	Number
8-10	RF stage assembly.	Cosmo MPlotkin	R. J. Walton	8-43-0
8-9	MG room, north side.	Cosmo AWise	R. J. Walton	8-44-0
8-9	MG room, overall view.	Cosmo AWise	R. J. Walton	8-45-0
8-10	Motor Generator.	Cosmo AWise	RWiJ. Walton	8-46-0
8-9	Vacuum testing chamber.	Cosmo IPolk	R. J. Walton	8-47-0
8-10	Magnet, showing coil winding and spreader bar.	Cosmo WMoore	R. J. Walton	8-48-0
8-9	Raceway for the Cosmotron.	Cosmo FSeufert	R. J. Walton	8-49-0 and 8-50-0
8-11	Geiger-Müller tube (drawing).	Reactor CRaseman	M. H. Bull	8-51-0
8-10	Nurse wheeling patient into radiation ward in the BNL hospital.	Medical LFarr	R. F. Smith	8-52-0
8-10	Nurses preparing children for bed in the children's ward.	Medical LFarr	RJW & RFS	8-53-0
8-10	Adult ward in radiation wing of the BNL hospital.	Medical LFarr	RJW & RFS	8-54-0
8-10	Dr. Dean working with infusion apparatus. Body fluids of patients are analyzed.	Medical LFarr	R. F. Smith	8-55-0
8-10	Radiation count being taken on thyroid patient in the hospital counting room. Patient has been injected with radio-iodine which is selective in so far as thyroid tissue is concerned and therefore is effective in destroying thyroid cancer tissue. The amount [illegible] absorbed by the gland is counted by means of the Geiger counter shown in the picture.	Medical LFarr	R. F. Smith	8-56-0

Date	Caption	Dept.	Photographer	Number
8-10	Oil particles from Meteorology smoke run; Stage 3. Neg.Mag. 735X Print Mag. 1470X.	Meteor. Bohnhorst	R. F. Smith	8-57-0
8-10	Oil particles from Meteorology smoke run; Stage 1-A. Neg.Mag. 735X Print Mag. 1470X.	Meteor. Bohnhorst	R. F. Smith	8-58-0
8-10	Oil particles from Meteorology smoke run; Stage 4A. Neg.Mag 735X Print Mag. 1470X.	Meteor. Bohnhorst	R. F. Smith	8-59-0
8-10	Oil particles from Meteorology smoke run; Stage 4B Neg.Mag. 735X Print Mag. 1470X.	Meteor. Bohnhorst	R. F. Smith	8-60-0
8-9	Radiation field showing tradescantia plants. View looking ~~southeast~~ west.	Biology ASparrow	R. F. Smith	8-61-0
8-9	Radiation field showing tradescantia plants. View looking southeast.	Biology ASparrow	R. F. Smith	8-62-0
8-11	Pneumatic tube carrier.	Reactor MFox	R. F. Smith	8-63-0
8-11	Sample container for target irradiation machine.	Reactor MFox	R. F. Smith	8-64-0
8-11	RF Stage.	Cosmo Blewett	R. J. Walton	8-65-0 and 8-66-0
8-11	Control panels for RF Stage.	Cosmo Blewett	R. J. Walton	8-67-0 thru 8-70-0
8-11	Cosmotron vault.	Cosmo JMedd	R. J. Walton	8-71-0
8-11	Ferrite blocks.	Cosmo MPlotkin	R. J. Walton	8-72-0
8-14	3 Bev. Cosmotron Vacuum Chamber Using Grids layout.	Cosmo IPolk	M. Herbert	8-73-0

Date	Caption	Dept.	Photographer	Number
8-15	Log λ vs. 1/V, Z constant. λ equals Disintegration constant. V equals Alpha Velocity. Even - Even Alpha Emitters. (Neg.No. 5-166-0 - Fig. 1).	Reactor IKaplan	P. Simack	8-74-0
8-15	Log λ vs. 1/V, A - 2Z constant λ equals Disintegration Constant. V equals Alpha Velocity. A - 2Z equals Neutron Excess. (Neg.No. 5-165-0 - Fig. 2).	Reactor IKaplan	P. Simack	8-75-0
8-15	U vs. E E equals Alpha Energy U equals Interval Potential. (Neg.No. 5-168-0 - Fig. 8).	Reactor IKaplan.	P. Simack	8-76-0
8-15	General view of four acre corn field. Dr. Singleton is standing next to row of short corn.	Biology Singleton	R. F. Smith	8-77-0
8-15	Dr. Singleton with short corn. Ordinary corn on left towers over the Dr. by several feet.	Biology Singleton	R. F. Smith	8-78-0
8-15	Dr. Singleton with short corn. Contr-ast with ordinary corn in the back-ground.	Biology Singleton	R. F. Smith	8-79-0
8-15	Dr. Singleton examining short corn in the genetics field.	Biology Singleton	R. F. Smith	8-80-0
8-15	Dr. Singleton with short corn plants.	Biology Singleton	R. F. Smith	8-81-0
8-15	Short corn in the genetics field.	Biology Singleton	R. F. Smith	8-82-0
8-15	Minimum Detectable Concentration vs. Sample Weight.	HPhysics FCowan	P. Simack	8-83-0
8-15	Concentration of Activity in Micro-curies per cc. vs. Sample Volume in Liters.	HPhysics FCowan	P. Simack	8-84-0
8-15	Self Absorption Coefficient vs. Sample Weight.	HPhysics FCowan	P. Simack	8-85-0
8-15	Ratio of Counting Efficiencies vs. Energy.	HPhysics FCowan	P. Simack	8-86-0
8-15	Efficiency Ratio vs. Sample Weight.	HPhysics FCowan	P. Simack	8-87-0

Date	Caption	Dept.	Photographer	Number
8-15	Counts per Minute vs. Absorber Thickness in mg/cm^2.	HPhysics FCowan	P. Simack	8-88-0
8-16	Copy. Magnetic field (gauss) vs. Angle with Tetragonal Axis (degrees).	MichState Physics CKikuchi	P. Simack	8-89-0
8-16	Copy. Theoretical prediction of line shape at Theta equals 90°. M equals line due to magnetic interaction. Q equals line due to quadrople interaction.	MichState Physics CKikuchi	P. Simack	8-90-0
8-16	Copy. Eigenvalues.	MichState Phsyics CKikuchi	P. Simack	8-91-0
8-16	Copy. Summary og Results.	MichState Physics CKikuchi	P. Simack	8-92-0
8-16	Crystalline Hyperfine Structure. Angular Dependence of Component Separation.	MichState Physics CKikuchi	P. Simack	8-93-0
8-15	Graph. Dog B-22 Wt. 17.2 kg.	Medical VanSlyke	P. Simack	8-94-0
8-15	Minutes Duration of Artery Clamping vs. % of Pre-Clamping Value.	Medical VanSlyke	P. Simack	8-95-0
8-15	Time-Course of Relative Specific Activity of Plasma Inorganic Phosphate.	Biology JSacks	P. Simack	8-96-0
8-15	Neutron Velocity (meter/sec.) vs. Cross Section (Barns).	Physics DHughes	P. Simack	8-97-0
8-15	Neutron Velocity (meter/sec.) vs. E_s.	Physics DHughes	P. Simack	8-98-0
8-15	Velocity (meter/sec.) vs. σ_s - Barns.	Physics DHughes	P. Simack	8-99-0
8-16	Exterior view of Cosmotron building showing heat exchanges on roof and transformer pad.	Cosmo JMedd	R. J. Walton	8-100-0

Date	Caption	Dept.	Photographer	Number
8-16	B. Turovlin setting "rabbit" in pneumatic system.	Reactor MFox	R. J. Walton	8-101-0
8-18	Two Meteorology weather vanes onthe tower.	Meteor. MSmith	M. H. Bull	8-102-0
8-18	Relative specific activities of Plasma Brain, and Muscle P 4 hours after intracisternal injection with tracer phosphate.	Biology JSacks	P. Simack	8-103-0
8-18	Relative specific activities of P compounds of brain and muscle 4 hours after intravenous injection of tracer phosphate.	Biology JSacks	P. Simack	8-104-0
8-18	Relative specific activities of muscle phosphorus compounds 4 hours after intravenous or intracisternal injection of tracer.	Biology Sacks	P. Simack	8-105-0
3-18	Angular correlation of successive quanta. (b).	Physics DFalkoff	P. Simack	8-106-0
3-18	Angular correlation of successive quanta. (a).	Physics DFalkoff	P. Simack	8-107-0
8-18	Angle θ between α-particle and γ-ray counters.	Phsyics DFalkoff	P. Simack	8-108-0
8-18	Frequency distribution of particle diameters.	Physics RWeiss	P. Simack	8-109-0
8-18	Equations: $\sigma(\theta)$ where σ equals πR^2 $\sigma(\theta)$ where σ equals $2\pi R^2$.	Physics RWeiss	P Simack	8-110-0
8-18	Diagram showing BF^3 counter, etc.	Physics RWeiss	P. Simack	8-111-0
8-18	Equations for slide.	Physics RWeiss	P. Simack	8-112-0
8-18	Spheres and Random Surfaces.	Physics RWeiss	P. Simack	8-113-0
8-18	Broadening vs. λ for 35 mm. Micronex.	Physics RWeiss	P. Simack	8-114-0
-18	Effect of particle size on broadening using Bismuth of varying mesh numbers.	Physics RWeiss	P. Simack	8-115-0

Date	Caption	Dept.	Photographer	Number
8-18	Effect on varying index of refraction.	Physics RWeiss	P. Simack	8-116-0
8-18	Effect of broadening on magnetization.	Physics RWeiss	P. Simack	8-117-0
8-18	Effect on $\bar{a}$ by immersion in CS_2.	Physics RWeiss	P. Simack	8-118-0
8-18	Effect on n by varying path length of 200-325 mesh Bismuth (30 mil slit).	Physics RWeiss	P. Simack	8-119-0
8-18	Effect of particle size on broadening using Bismuth of varying mesh numbers.	Physics RWeiss	P. Simack	8-120-0
8-18	Effect on $\bar{a}$ by immersion in D_2O.	Physics RWeiss	P. Simack	8-121-0
8-18	Broadening vs. λ^2	Physics RWeiss	P. Simack	8-122-0
8-18	Total cross section for small angle scattering by spheres.	Physics RWeiss	P. Simack	8-123-0
8-24	Copy of photograph of graph.	Medical VanSlyke	P. Bennett	8-124-0
8-21	Pyrex Filter Tube.	Reactor DBareis	R. J. Walton	8-125-0
8-17	Dr. Joseph Kelly.	Portrait	APChristoffersen	8-126-0
8017	Dr. Joseph Kelly.	Portrait	APChristoffersen	8-127-0
8-17	Goudsmit's Timer.	Electronic JBHKuper	R. J. Walton	8-128-0
8-17	Atmospheric Gradient.	Electronic JBHKuper	R. J. Walton	8-129-0
8-17	Crystal Grower.	Electronic JBHKuper	R. J. Walton	8-130-0
8-23	Spectra of electrons scattered from 1 mil copper foil for incident energies of 0.68, 0.98, 1.29 and 1.53 Mev.	Cosmo MGWhite	C. Lee	8-131-0

Date	Caption	Dept.	Photographer	Number
-23	Scattering Apparatus.	Cosmo MGWhite	C. Lee	8-132-0
8-23	Graph - Positrons.	Cosmo MGWhite	C. Lee	8-133-0
8-23	Graph - Electrons.	Cosmo MGWhite	C. Lee	8-134-0
8-23	Spectra of electrons scattered from platinum foils of various thicknesses incident energy equals 0.98 Mev.	Cosmo MGWhite	C. Lee	8-135-0
8-23	Multiple Scattering Calculations.	Cosmo MGWhite	C. Lee	8-136-0
8-23	Spectra of electrons scattered from 1 mil lead foil for incident energies of 0.68, 0.98, 1.29 and 1.53 Mev.	Cosmo MGWhite	C. Lee	8-137-0
8-23	Spectra of electrons ~~from~~ scattered from aluminum foils of various thicknesses . Incident energy equals 0.98 Mev.	Cosmo MGWhite	C. Lee	8-138-0
-23	Drawing of Texolite holder with component parts.	Physics DFrisch	C. Lee	8-139-0
8-23	Ratio R of residual fission fragment activity at wear depth D to activity of unworn standard.	Physics DFrisch	C. Lee	8-140-0
8-22	Lab employees gathered to hear Dr. L. B. Borst speak at the party celebrating the start of the BNL Reactor.	Photo JGarfield	R. J. Walton	8-141-0
8-21	Aerial view of experimental field.	Biology Christensen	R. J. W lton	8-142-0
8-21	Aerial view of experimental field.	Biology Singleton	R. J. Walton	8-143-0
8-21	Aerial view of radiation field.	Biology Singleton	R. J. Walton	8-144-0
8-18	Panel and new light set-up for monitoring shcak.	HPhysics MWeiss	R. J. Walton	8-145-0

Date	Caption	Dept.	Photographer	Number
18	Ratemeter Battery Charger.	HPhysics MWeiss	R. J. Walton	8-146-0
8-18	Drive unit for recording camera.	HPhysics MWeiss	R. J. Walton	8-147-0
8-18	Camera recording set-up in shack.	HPhysiss MWeiss	R. J. Walton	8-148-0
8-18	Dust monitoring equipment in shack.	HPhysics MWeiss	R. J. Walton	8-149-0
8-22	Roof of monitoring shack.	HPhysics MWeiss	R. J. Walton	8-150-0
8-22	Front view of Mobile Trailer.	HPhysics MWeiss	R. J. Walton	8-151-0
8-22	Interior of Mobile Trailer.	HPhysics MWeiss	R. J. Walton	8-152-0
8-24	Goudsmit's Timer. (Replaces 8-128-0).	Electronic JBHKuper	R. J. Walton	8-153-0
8-24	Atmospheric Gradient. (Replaces 8-129-0).	Electronic JBHKuper	R. J. Walton	8-154-0
8-24	Time of Flight vs. Transmission.	Physics DHughes	C. Lee	8-155-0
8-24	Number of Neutrons vs. σ (mb).	Physics DHughes	C. Lee	8-156-0
8-24	Neutron Energy in Electron Volts vs. σ in Barns.	Physics DHughews	C. Lee	8-157-0
8-24	Transmission and Resolution.	Physics DHughes	C. Lee	8-158-0
8-24	E_n in Mev. vs. σ_T in Barns - V.	Physics DHughes	C. Lee	8-159-0
8-24	E_n in Mev. vs. σ_T in Barns - Sb.	Physics DHughes	C. Lee	8-160-0
8-25	E_n in Mev vs. σ_T in Barns - In.	Physics DHughes	C. Lee	8-161-0
-24	E_n in Mev. vs. σ_T in Barns - I.	Physics DHughes	C. Lee	8-162-0

Date	Caption	Dept.	Photographer	Number
8-24	E_n in ev vs. σ_t in Barns - Sb.	Physics DHughes	C. Lee	8-163-0
8-24	E_n in Mev. vs. σ_t in Barns - Al.	Physics DHughes	C. Lee	8-164-0
8-24	E_n in ev vs. σ_t in Barns - I.	Physics DHughes	C. Lee	8-165-0
8-24	E_n in Mev. vs. σ_t in Barns - Ti.	Physics DHughes	C. Lee	8-166-0
8-24	Transmission of Wolfram Isotopes.	Physics DHughes	C. Lee	8-167-0
8-24	E_n in Mev. vs. σ_t in Barns - Pb.	Physics DHughes	C. Lee	8-168-0
8-24	E_n in ev. vs. σ_t in Barns - C.q	Physics DHughes	C. Lee	8-169-0
8-24	E_n in Mev. vs. σ_t in B rns - S.	Physics DHughes	C. Lee	8-170-0
8-23	Tradescantia Plants.	Biology Christensen	R. J. Walton	8-171-0
8-23	Tradescantia Plants - 258 & 259.	Biology Christensen	R. J. Walton	8-172-0
8-22	Tradescantia Plants - 306 & 307.	Biology Christensen	R. J. Walton	8-173-0
8-22	Tradescantia Plants - 248 & 249.	Biology Chrsitensen	R. J. Walton	8-174-0
8-22	Tradescantia Plants - 308 & 309.	Biology Christensen	R. J. Walton	8-175-0
8-22	Tradescantia Plants - 277 & 276.	Biology Christensen	R. J. Walton	8-176-0
8-22	Tradescantia Plants - 268 & 269.	Biology Christensen	R. J. Walton	8-177-0
8-22	Tradescantia Plants - 278 & 279.	Biology Christensen	R. J. Walton	8-178-0

Date	Caption	Dept.	Photographer	Number
82				
8-25	Zero order stretching frequencies for the isotopic N_2O molecules (cm^{-1}).	Chemistry Bigeleisen	M. H. Bull	8-179-0
8-25	Product rule for a linear XYZ molecule.	Chemistry Bigeleisen	M. H. Bull	8-180-0
8-25	Calculation of isotopic exchange equilibria from spectroscopic data.	Chemistry Bigeleisen	M. H. Bull	8-181-0
8-25	Correction for observed frequencies of isotopic molecules for anharmonicity.	Bigleisen Chemistry	M. H. Bull	8-182-0
8-25	Potential functions and force constnats of the stretching motions of a linear XYZ molecule.	Chemistry Bigeleisen	M. H. Bull	8-183-0
8-25	Preparation of $N^{15}N^{14}O^{16}$ and $N^{14}N^{15}O^{16}$	Chemistry Bigeleisen	M. H. Bull	8-184-0
8-25	Zero order bending frequencies for the isotopic N_2O molecules (cm^{-1})	Chemistry Bigeleisen	M. H. Bull	8-185-0
8-25	Force constants and product rule check for the stretching frequencies in N_2O.	Chemistry Bigeleisen	M. H. Bull	8-186-0
Frequency shifts on N				
8-25	Frequency shifts on N^{15} substitution in N_20 (cm^{-1}).	Chemistry Bigeleisen	M. H. Bull	8-187-0
8-25	Partition function ratios and exchange equilibria involving N_2O.	Chemistry Bigeleisen	M. H. Bull	8-188-0
8-25	Wave length in microns vs. Transmission.	Chemistry Bigeleisen	M. H. Bull	8-189-0
8-25	Diagram for slide.	Physics DHughes	M. Herbert	8-190-0
8-24	Top and bottom views of filter for "still".	Reactor Manowitz	R. J. Walton	8-191-0 and 8-192-0

Date	Caption	Dept.	Photographer	Number
8-50	Milton Kern, biology technician, operating apparatus for electroplating radioactive iron. A belt assembly rotates glass rods which stir a solution containing some radioactive iron. The iron was extracted from blood or tissue samples where it had been deposited by normal bodily treatment of compounds which had been "tagged" with it.	Biology	J. F. Garfield	8-193-0
8-50	Workmen assembling coils in the cosmotron at BNL. When the machine is complete, electric power fed into the coils will energize the giant steel blocks shown in the picture, converting them into a powerful electromagnet. The resultant magnetic field will bend, in a circular path, atomic particles speeding through a circular tube inside the magnet so that a single particle will complete the circle three million times in a second. The cosmotron is so named because it will produce energies as high as some of the primary cosmic rays (particles coming from space beyond the earth's atmosphere).	Cosmotron	J. F. Garfield	8-194-0 and 8-195-0
8-50	Control panel for the 60" cyclotron.	Cyclotron	J. F. Garfield	8-196-0
8-50	Dr. Robert Steele working with his air-conditioned mouse chamber.	Biology	J. F. Garfield	8-197-0
8-28	Pressure - Kg/cm^2 vs. Mean activation energy - cals/gm.mol.	Chemistry Friedman	M. H. Bull	8-198-0
8-28	Equations for slides.	Chemistry Friedman	M. H. Bull	8-199-0 thru 8-203-0
8-28	Mass spectrometer analysis of the products of the decomposition of $N^{15}N^{14}O$ and $N^{14}N^{14}O$.	Chemistry Friedman	M. H. Bull	8-204-0
8-28	Table - Reactnats.	Chemistry Friedman	M. H. Bull	8-205-0
8-28	Kinetics of Gas Reaction.	Chemistry Friedman	M. H. Bull	8-206-0

Date	Caption	Dept.	Photographer	Number
8-28	Intiial Pressure Kg/cm^2 vs. Reciprocal half-life.	Chemistry Friedman	M. H. Bull	8-207-0
8-9	The Light Metal Carbonyls.	Chemistry RAnderson	C. Lee	8-208-0
8-29	Apparatus for the preparation of potassium carbonyl.	Chemistry RAnderson	C. Lee	8-209-0
8-29	Preparation of Meso-Inositol C_6^{14}.	Chemistry RAnderson	C. Lee	8-210-0

Date	Caption	Dept.	Photographer	Number
8-29	Potassium Carbonyl Reaction.	Chemistry Anderson	C. Lee	8-211-0
8-29	Mass spectrum of Ethane and Deuteroethane.	Chemistry Thompson	M. H. Bull	8-212-0 and 8-213-0
8-29	Infra-red absorption data for Butane-d_{10} and Isobutane-d_{10}.	Chemistry Thompson	M. H. Bull	8-214-0
8-29	Analysis of the Deutero-carbon gas products.	Chemistry Thompson.	M. H. Bull	8-215-0
8-29	Analysis of Gas Products.	Chemistry Thompson	M. H. Bull	8-216-0
8-29	Yields of Fischer Tropsch Products for Deuterium and Carbon Monoxide Input.	Chemistry Thompson	M. H. Bull	8-217-0
8-29	Mass Spectrum of Methane.	Chemistry Thompson	M. H. Bull	8-218-0
8-29	Infra-red absorption data for Prppane-d_8 and Propylene-d_6 (cont)	Chemistry Thomspon	M. H. Bull	8-219-0
8-29	Infra-red absorption data for Methane-d_4.	Chemistry Thompson	M, H. Bull	8-220-0
8-29	Infra-red absorption data for Propane-d_8 and Propylene-d_6.	Chemistry Thomspon	M. H. Bull	8-221-0
8-29	Fischer Tropsch data for deuterium and carbon monoxide on cobalt catalyst.	Chemistry Thompson	M. H. Bull	8-222-0
8-29	Infra-red absorption data for Ethylene-d_4 and Ethane-d_6.	Chemistry Thompson	M. H. Bull	8-224-0 and 8-223-0
8-3	Potatoes used in Tyrosinase study.	Biology Sparrow	J. F. Garfield	8-225-0

Date	Caption	Dept.	Photographer	Number
8-29	General view of diesels in the cloud chamber laboratory.	Physics Shutt	R. J. Walton	8-226-0
8-29	I_2 in Propane.	Chemistry SFreed	M. H. Bull	8-227-0
8-29	Mole Ratio.	Chemistry SFreed	M. H. Bull	8-228-0
8-29	I_2 in Propene.	Chemistry SFreed	M. H. Bull	8-229-0
8-29	I_2 in pure Propane with added Propene.	Chemistry SFreed	M. H. Bull	8-230-0
8-30	Absolute Counting Rate - Gain = 32.	Physics Madansky	M. H. Bull	8-231-0
8-30	Block Diagram.	Physics Mad§nsky	M. H. Bull	8-232-0
8-30	"B" Counting Rate o = Cobalt; Gain = 48.	Physics Madansky	M. H. Bull	8-233-0
8-30	Coincidence Counting Rate. Gain = 16.	Physics Madansky	M. H. Bull	8-234-0
8-30	Cadmium Coincidence Counting Rate. Gain = 16.	Physics Madansky	M. H. Bull	8-235-0
8-30	Absolute Counting Rate. Gain = 16.	Physics Madansky	M. H. Bull	8-236-0
8-30	Coincidence Counting Rate. Gain = 32.	Physicss Madansky	M. H. Bull	8-237-0
8-30	Graph for slide.	Chemistry Bauer	M. H. Bull	8-238-0
8-30	Dipole Moments Increments.	Chemistry Bauer	M. H. Bull	8-239-0
8-30	Crystals isomorphous with those of $Me_3N : BF_3$.	Chemistry Bauer	M. H. Bull	8-240-0

Date	Caption	Dept.	Photographer	Number
8-30	Diagrams for slides.	Chemistry Bauer	M. H. Bull	8-241-0 thru 8-243-0
8-30	Typical values for dipole moments of donor-acceptor complexes, and of their organic components.	Chemistry Bauer	M. H. Bull	8-244-0
8-30	Diagrams for slides.	Chemistry Bauer	M. H. Bull	8-245-0
8-30	Criteria for acid-base reaction. Criterion for acid-base interaction.	Chemistry Bauer	M. H. Bull	8-246-0
8-30	Propose as a measure of Base Character.	Chemistry Bauer	M. H. Bull	8-247-0
8-30	Force Constants (x 10^{+5} dynes/cm).	Chemistry Bauer	M. H. Bull	8-248-0
8030	Estimated values for various terms.	Chemistry Bauer	M. H. Bull	8-249-0
8-30	Effects of alykl substitution on I. P. of Base.	Chemistry Bauer	M. H. Bull	8-250-0
8-30	Diagrams for slides.	Chemistry Bauer	M. H. Bull	8-251-0
8-30	Changes in heat content observed for systems undergoing acid-basee reactions.	Chemistry Bauer	M. H. Bull	8-252-0
8-30	What structural changes take place on bond formation?	Chemistry Bauer	M. H. Bull	8-253-0
8-30	Diagrams for slides.	Chemistry Bauer	M. H. Bull	8-254-0 and 8-255-0
8-30	Graph for slide.	Chemistry Bauer	M. H. Bull	8-256-0
8-30	Molar extinction coefficients of Methylene Blue.	Chemistry Bauer	M. H. Bull	8-257-0

Date	Caption	Dept.	Photographer	Number
8-29	Spectra for slides.	Chemistry KSancier	Charles Lee	8-258-0 thru 8-260-0
8-50	Observer at BNL using a microscope to examine a photographic plate exposed to cosmic rays in a balloon at altitudes of 90,000 feet. Atomic particles in the cosmic rays leave traces in the emulsion of the plate. The cosmic rays are studied at Brookhaven because they contain atomic particles of much greater energy than can be obtainedx from any machine,	Physics	J. F. Garfield	8-261-0
8-50	Scientist at BNL studying disintegration of an atom after being hit by a cosmic ray. The particles resulting from the disintegration leave traces in a pattern called a star in a photographic plate, an enlargement of which the scientist is studying. Plates are exposed in balloon flights at 90,000 feet, where cosmic radiation is intense. Brookhaven scientists study cosmic rays because they contain atomic particles of much greater energy than can be obtained by any machine.	Physics	J. F. Garfield	8-262-0
8-50	Scene in the Physics Department, BNL. Tunis Wentink introducing a substance containing radioactive sulphur atoms into a microwave absorption spectrometer. Microwaves, which are similar to light waves, are absorbed by molecules in different ways, depending upon the molecular structure and upon the properties of the nuclei of the atoms in question. The spectrometer measures the characteristics of the absorption from which neutron data on nuclear properties can be obtained.	Physics	J. F. Garfield	8-263-0
8-50	Two views of Dr. W. R. Singleton with his experimental corn growing in the radiation field.	Biology	APChristoffersen	8-264-0 and 8-265-0

Date	Caption	Dept.	Photographer	Number
8-50	Scientists at BNL examine cloud chamber photographs of nuclear events. Such photographs indicate collisions of atomic particles, and the behavior of such particles increases knowledge of atomic structure.	ClChamber Physics	J. F. Garfield	8-266-0
8-50	NO NEGATIVE.			8-267-0
8-30	Relationship between number of supernumbrary chromosomes at first meiotic metaphase and at pollen grain metaphase.	Biology ASparrow	P. Simack	8-268-0
8-30	Dosage equals r. vs. Height in cm.	Biology ASparrow	P. Simack	8-269-0
8-30	Yield comparisons of 1948 and 1949 irradiations of potato.	Biology ASparrow	P. Simack	8-270-0

Date	Caption	Dept.	Photographer	Number
8-30	Yield of potato tubers grown from plants under continuous gamma irradiation.	Biology Sparrow	P. Simack	8-271-0
8-30	Germinations 8 days after planting calculated as % of controls.	Biology Sparrow	P. Simack	8-272-0
8-30	Pairing of supernumerary chromo-	Biology		
8-50	Dr. Everrett R. Johnson of the Chemistry Department of BNL immersing a sample in liquid nitrogen. The sample, a chemical compound bombarded by rays from a Van de Graaff generator, or "atomic rifle", is in a tiny sealed glass flask inside a tube which is part of the glasss assembly shown. The liquid nitrogen in the thermos bottle in Johnson's hand causes the liquid compound to freeze and break the flask. The compound can then be analyzed in the glass apparatus to determine the products formed from it by the radiation.	Chemistry	J. G rfield	8-274-0
	for slide.	KSancier	C. Lee	8-277-0
8-30	Acid-Base Equilibria in ~~199%~~ 100% sulphuric acid-	Chemistry Bigeleisen	C. Lee	8-278-0
8-30	Condensation of O-Benzoyl-benzoic acid catalyzed by sulphuric acid.	Chemistry Bigeleisen	C. Lee	8-279-0
8-30	Indicators in general acids and the acidity function.	Chemistry Bigeleisen	C. Lee	8-280-0
8-30	Molality of inhibitor.	Chemistry Bigeleisen	C. Lee	8-281-0
8-30	Molality of water.	Chemistry Bigeleisen	C. Lee	8-282-0
8-30	Acid catalysis in fuming sulphuric acid.	Chemistry Bigeleisen	C. Lee	8-283-0
8-30	Correlation of acid catalysis and acidity of sulphuric acid solutions.	Chemistry Bigeleisen	C. Lee	8-284-0
	*** 8-276-0 no negative. Refer to 5-245-0.			

Date	Caption	Dept.	Photographer	Number
8-31	Molality H_2O Molality SO_3.	Chemistry Bigeleisen	M. H. Bull	8-285-0
8-31	J. P. 50 years. Weight = 45.9 kg. E. C. F. (V_s) = 9.07 l. T. B. W. = 25.9 l.	Medical Deane	P. Simack	8-286-0
8-31	D. R. 55 years Weight = 64.4 kg. B. V. (V_{p32}) = 4.07 l. P. V. = 2.36 l. E. C. F. (V_s) = 1.21 l. T. B. W. (V_a) = 3.75 l.	Medical Deane	P. Simack	8-287-0
8-31	H. C. 60 years Weight = 70.9 kg. B. V. (V_{p32}) = 4.50 l. P. V. = 2.60 l. E. C. F. (V_s) = 14.65 l. T. B. W. (V_a) = 40.6 l. V_{Na24} = 1.91 l.	Medical Deane	P. Simack	8-288-0
8-29	Pocket ionization chamber and chamber with electroscope.	Electronic JBHKuper	R. J. Walton	8-289-0
8-29	931A photomultiplier tube, scintillation srystal, and 5819 photomultiplier tube.	Electronic JBHKuper	R. J. Walton	8-290-0
8-29	Counter tubes for : GM tube for cosmic rays BF-3 neutron proportional counter Thin wall GM tubes Thin window GM tubes.	Electronic JBHKuper	R. J. Walton	8-291-0
8-29	Radiation detector: "Chang and Eng".	Electronic JBHKuper	R. J. Walton	8-292-0
8-29	Hand radiation detectors and survey meters.	Electronic JBHKuper	R. J. Walton	8-293-0
8-30	Close-up of rack in hot cell.	Reactor LStang	R. J. Walton	8-294-0

Date	Caption	Dept.	Photographer	Number
8-50	Views of Dr. J. P. Blewett and J. S. Medd with the cosmotron model.	Cosmo	APChristoffersen	8-313-0 and 8-314-0
8-50	Close-up of a section of the cosmotron magnet.	Cosmo	J. F. Garfield	8-315-0
8-50	Workmen assembling coils in the cosmotron at BNL. When the machine is complete, electric power fed into the coils will energize the giant steel blcoks shown in the picture, converting them into a powerful electromagnet. The resultant magnetic field will bend, in a circular path, atomic particles speeding through a circular tube inside the magnet so that a single particle will complete the circle three million times in a second. The cosmotron is so named because it will produce energies as high as some of the primary cosmic rays (particles coming from space beyond the earth's atmosphere). REFER: 8-194-0 & 8-195-0.	Cosmo	J. F. Garfield	8-316-0 thru 8-319-0
8-50	Entrance to the Cyclotron-Van de Graaff Building.	Cyclo.	APChristoffersen	8-320-0
8-50	Various views of the 60" cyclotron. These coils are of the pancake type wound with hollow aluminum tubing through which the cooling water circulates. The magnet yoke was fabricated by U.S. Steel Corporation and erected at BNL before the building walls surrounding it were constructed.	Cyclo.	J. F. Garfield	8-321-0 thru 8-324-0
8-50	Various views of the control panel fort the 60" cyclotron at BNL. REFER: 8-196-0.	Cyclo.	J. F. Garfield	8-325-0 thru 8-328-0
8-50	Two views of the Van de Graaff generator. The tank will contain dry nitrogen at 200 lbs. per square inch. This Van de Graaff is of the horizontal type developed by R.G. Herb, University of Wisconsin. The circuitry is cheifly for the control of the proton source.	VdGraaff	J. F. Garfield	8-329-0 and 8-330-0

Date	Caption	Dept.	Photographer	Number
8-50	Exterior view of the Biology Building.	Biology	APChristoffersen	8-331-0
8-50	Electroplating apparatus for electro-plating blood iron on copper discs for later counting.	BIOLOGY	J. F. Garfield	8-332-0
8-50	Dr. R. Steele working with his moude apparatus.	Biology	APChristoffersen	8-333-0
8-50	Close-up of all glass metabolism cage for working with Carbon 14 in mice. The mice are fed radioactive sucrose where the radiocarbon is distributed uniformly in the sugar molecule. The purpose of the experiment is to follow the course of the sugar carbon through the body of the mouse and to measure the amount present in the various organs and tissues and in the excreta and expired air over a period of time following feeding.	Biology	APChristoffersen	8-334-0
8-50	Close-up of Dr. W.R. Singleton ear cranking source in the radiation field.	Biology	APChristoffersen	8-335-0
8-50	Various views of experimental corn growing in the radiation field.	Biology	APChristoffersen	8-336-0 thru 8-339-0
8-50	Two views of Frank German working with plants in the Biology greenhouse.	Biology	APChristoffersen	8-340-0 and 8-341-0
8-50	G. Davison making smears of pollen mother cells.	Biology	J. F. Garfield	8-342-0 and 8-343-0
8-50	Dr. L. Sharpe shown lifting rat from cage preparatory to injecting it to check iron metabolism.	Biology	J. F. Garfield	8-344-0
8-50	Dr. L. Sharpe preparing hypodermic prior to injecting rat to check iron metabolism.	Biology	J. F. Garfield	8-345-0
8-50	Dr. L. Sharpe shown injecting rat to check iron metabolism.	Biology	J. F. Garfield	8-346-0
8-50	Technician working in a biology laboratory.	Biology	J. F. Garfield	8-347-0 and 8-348-0

Date	Caption	Dept.	Photographer	Number
8-50	Dr. R. Steele working with apparatus in his laboratory.	Biology	APChristoffersen	8-349-0 thru 8-351-0
8-50	Dr. E.R. Johnson shown with some of the equipment used in connection with the "baby" Van de Graaff generator.	Chemistry	APChristoffersen ~~J. F. Garfield~~	8-352-0 and 8-353-0
8-50	Dr. E.R. Johnson preparing a chemical compound to be put in a glass flask which is then bombarded by the "baby" Van de Graaff generator.	Chemistry	J. F. Garfield	8-354-0 thru 8-356-0
8-50	Control panel for the "baby" Van de Graaff generator located in a chemistry laboratory.	Chemistry	J. F. Garfield	8-357-0 and 8-358-0
8-50	View of E-1, one of the area survey monitoring shacks located on site.	HPhysics	APChristoffersen	8-359-0
8-50	Close-up of sign on the side of E-1, one of the area survey monitoring shacks located on site.	HPhysics	APChristoffersen	8-360-0
8-50	Main administration building in the Medical Department complex.	Medical	APChristoffersen	8-361-0
8-50	Radiation Area sign in the Medical Department.	Medical	J. F. Garfield	8-362-0
8-50	Two nurses about to enter a radiation area in the BNL hospital.	Medical	APChristoffersen	8-363-0
8-50	Dr. D. D. Van Slyke of the Medical Department working with a Van Slyke machine.	Medical	J. F. Garfield	8-364-0
8-50	Thyroid cancer patient in the BNL hospital.	Medical	APChristoffersen	8-365-0 and 8-366-0
8-50	Thyroid cancer patient about to take an "atomic cocktail".	Medical	APChristoffersen	8-367-0
8-50	Count being taken on thyroid cancer patient in the BNL hospital.	Medical	APChristoffersen	8-368-0
8-50	Technicians using microscopes to examine photographic plates exposed (continued on the next page)			

Date	Caption	Dept.	Photographer	Number
8-30	General view of hot clel, showing rack in place and cell doors closed.	Reactor LStang	R. J. Walton	8-295-0
8-30	General views, showing rack in place, with hot cell doors open.	Reactor LStang	R. J. Walton	8-296-0 and 8-297-0
8-30	A portable crane operator moves research apparatus into a "hot cell" at the Hot Lab, BNL. The equipment has been tested in "dry runs" and is now ready to be used in an actual experiment in the "hot cell". Scientists and technicians operate the equipment by remote control instruments outside the heavy steel doors and watch their work through periscopes. By mounting the apparatus on a mobile panel, all equipment can be pre-assembled and pre-tested as a complete unit in another room before placement in the cell. Similarly, it can be moved as a unit to a special room for decontamination after use. Thus, no time is lost between experiments in the cell itself. Chemical processing can be performed at a very high level of radioactivity equivalent to 50 curies of two-million electron-volt gamma rays.	Reactor LStang	R. J. Walton	8-298-0 and 8-299-0
8-30	Close-up of Valve.	Reactor LStang	R. J. Walton	8-300-0
8-50	Children and nurses playing in the sandbox on the BNL hospital grounds.	Medical	APChristoffersen	8-301-0 thru 8-306-0
8-50	Negative Number 8-307-0 sent to Signal Corps. Refer to Negative Number 8-357-0 for dupliaate.			
8-22	Lab party celebrating pile criticality.	Reactor	J. F. Garfield	8-308-0 and 8-309-0
8-50	Entrance to Administration Building.	Admin.	APChristoffersen	8-310-0
8-50	Entrance to AEC Building.	AEC	APChristoffersen	8-311-0
8-50	View of the Cosmotron Building with the entrance shown in the center.	Cosmotron	APChristoffersen	8-312-0

Date	Caption	Dept.	Photographer	Number
	to cosmic rays in a balloon at altitudes of 90,000 feet. Atomic particles in the cosmic rays leave traces in the emulsion of the plate. The cosmic rays are studied at Brookhaven because they contain particles of much greater energy than can be obtained by any machine. REFER: 8-261-0.	Physics	J. F. Garfield	8-369-0 thru 8-371-0
8-50	Tunis Wentink introducing a substance containing radioactive sulphur atoms into a microwave absorption spectrometer. Microwaves, which are similar to light waves, are absorbed by molecules in different ways, depending upon molecular structure and upon the properties of the nuclei in the atoms in question. The spectrometer meausres the characteristics of the absorption of which neutron data on nuclear properties can thus be obtained. REFER: 8-263-0.	Physics	APChristoffersen	8-372-0
8-50	Dr. Earle C. Fowler working at the high pressure cloud chamber. Cloud chamber operates at 300 atmospheres of pressure. The chamber of approximately 5 gallons volume is mounted at the center of a non-magnetic steel tank filled with oil, between the pole pieces of an electromagnet. Field intensity will be approximatley 30,000 gauss. Expansion s are made by releasing a certain amount of oil from the tank into the expansion vessel. Pictures are taken through two quartz windows by means of two cameras mounted infront of the tank.	ClChamber Physics	APChristoffersen	8-373-0 and 8-374-0
8-50	Photograph of cloud chamber for model B.	ClChamber Physics	APChristoffersen	8-375-0
8-50	Tunis Wentink introducing a substance containing radioactive sulphur atoms into a microwave absorption spectrometer. REFER: 8-372-0.	Physics	APChristoffersen	8-376-0½

Date	Caption	Dept.	Photographer	Number
8-50	Box around cloud chamber set-up showing warning sign. (Dr. E. C. Fowler at the left).	ClChamber Physics	APChristoffersen	8-377-0
8-50	Scientists at BNL studying disintegration of an atom after being hit by a cosmic ray. (star tracks) REFER: 8-262-0.	Physics	J. F. Garfield	8-378-0 and 8-379-0
~~85-0~~ 8-50	Scientists at BNL examine cloud chamber photographs of nuclear events. Such photographs indicate collisions of atomic particles, and the behavior of such particles increase knowledge of atomic structure. REFER: 8-266-0.	CLChamber Physics	J. F. Garfield	8-380-0
8-50	Two views of the BNL waste disposal tank farm.	Reactor	APChristoffersen	8-381-0 & 8-382-0

September

Date	Caption	Dept.	Photographer	Number
9-1	Possible Structure for Potassium Carbonyls.	Chemistry Anderson	P. Simack	9-1-0
9-5	Carbon dioxide effects on biosynthesis of succinic acid by washed cells.	Biology Cochrane	P. Simack	9-2-0
9-5	Fixation of $C^{14}O_2$ in succinic acid.	Biology Cochrane	P. Simack	9-3-0
9-5	Effect of inhibitors on formation of succinic acid by washed cells.	Biology Cochrane	P. Simack	9-4-0
9-5	Glucose consumed vs. Succinic acid.	Biology Cochrane	P. Simack	9-5-0
9-5	Biosynthesis of succinic acid by washed cells.	Biology Cochrane	P. Simack	9-6-0 and 9-7-0
9-5	Succinic acid production by streptomyces coelicolor.	Biology Cochrane	P. Simack	9-8-0
9-5	Utilization of succinate by washed cells of streptomyces SPP.	Biology Cochrane	P. Simack	9-9-0
9-6	Multisphere on Cosmotron roof.	Cosmo	R. J. Walton	9-10-0
9-6	Polarization direction correlation of Rh^{106}.	Physics DFalkoff	P. Simack	9-11-0
9-6	Polarization-direction correlation for Sc^{46}.	Physics DFalkoff	P. Simack	9-12-0
9-6	Disintegration Scheme for Rh^{106}.	Physics DFalkoff	P. Simack	9-13-0
9-6	R/Q as a function of J.	Physics DFalkoff	P. Simack	9-14-0
9-6	S/Q as a function of J.	Physics DFalkoff	P. Simack	9-15-0
9-6	Schematic diagram of experimental arrangement of polarimeter.	Physics DFalkoff	P. Simack	9-16-0
9-6	R. O. 43 equals Rhizopus oryzae. Anaerobic 108 hrs.	Biology MGibbs	M. H. Bull	9-17-0

Date	Caption	Dept.	Photographer	Number
9-6	R. O. 45 equals Rhizppus oryzae. Anaerobbic 36 hrs.	Biology MGibbs	M. H. Bull	9-18-0
9-6	R. O. 42 Rhizopus oryzae/ Anaerobic 36 hrs.	Biology MGibbs	M. H. Bull	9-19-0
9-6	Diagram - Porous area.	Biology RSteele	P. Simack	9-20-0
9-6	Hysteresis loops for ferramic "D" as function of temperature.	Cosmo MPlotkin	M. H. Bull	9-21-0
9-6	Distribution of streptomycin resistant bacteria in original culture.	Biology BRubin	P. Simack	9-22-0
9-6	Subculture <u>One</u>.	Biology BRubin	P. Simack	9-23-0
9-6	Subculture <u>Two</u>.	Biology BRubin	P. Simack	9-24-0
9-6	Subculture <u>Three</u>.	Biology BRubin	P. Simack	9-25-0
9-6	Dynamics of Mutant Population.	Biology BRubin	P. Simackk	9-26-0
9-6	Distribution of Mutant Types through Three Successive Subcultures.	Biology BRubin	P. Simack	9-27-0
9-6	Drawing and diagram; Mutation Rate and Cumulative Mutation.	Biology BRubin	P. Simack	9-28-0
9-6	Time in Hours vs. Optical Density.	Biology BRubin	P. Simack	9-29-0 and 9-30-0
9-7	Degradation of Synthetic Lactic Acid.	Biology MGibbs	C. Lee	9-31-0
9-6	Storage tanks for active waste under hot lab building.	Reactor PRichards	R. J. Walton	9-32-0 thru 9-42-0
	COPIES FROM <u>THE EFFECTS OF ATOMIC WEAPONS</u>.			
9-7	The mushroom cloud and first stages of the base surge following the "Baker" explosion at Bikini.	Electronic JBHKuper	C. Lee	9-43-0

Date	Caption	Dept.	Photographer	Number
9-7	The base surge developing after the "Baker" test.	Electronic JBHKuper	C. Lee	9-44-0
9-7	Table The limit of light damage at 8 miles.	Electronic JBHKuper	C. Lee	9-45-0
9-7	Formation of the plume (column) in the "Baker" test.	Electronic JBHKuper	C. Lee	9-46-0
9-8	Peak overpressure in shock wave as function of distance from atomic explosion in infinite homogeneous atmosphere.	Electronic JBHKuper	C. Lee	9-47-0
9-8	Time of arrival of shock front as function of distance in infinite homogeneous atmosphere.	Electronic JBHKuper	C. Lee	9-48-0
9-8	Shock pressure distance curves at successive times.	Electronic JBHKuper	C. Lee	9-49-0
9-8	Duration of positive phase of shock w wave as function of distance in infinite homogeneous atmosphere.	Electronic JBHKUper	C. Lee	9-50-0
9-8	Dosage rate as function of time.	Electronic JBHKuper	C. Lee	9-51-0
9-8	Proportion of total dosage of initial gamma radiation received as function of time after explosion.	Electronic JBHKuper	C. Lee	9-52-0
9-8 9-8	Thickness of concrete required as function of distance.	Electronic JBHKuper	C. Lee	9-53-0
9-8	Total dosage of initial gamma radiation as function of distance from explosion.	Electronic JBHKuper	C. Lee	9-54-0
9-8	Temperature and radius of ball of fire as function of time after explosion.	Electronic JBHKuper	C. Lee	9-55-0
9-8	Total accumulated dosage as function of time.	Electronic JBHKuper	C. Lee	9-56-0
9-8	Distance from explosion at which definite amounts of thermal energy are delivered as function of energy release of bomb.	Electronic JBHKuper	C. Lee	9-57-0

Date	Caption	Dept.	Photographer	Number
9-8	Total gamma activity of fission products in megacuries.	Electronic JBHKuper	C. Lee	9-58-0
9-8	Critical energies and distances from atomic explosions.	Electronic JBHKuper	C. Lee	9-59-0
9-7	Corn seed radiation chamber clamped on pole containing radio cobalt in the gamma field.	Biology Singleton	R. F. Smith	9-60-0
9-8	Injector inflector for the Cosmotron.	Cosmo Cottingham	R. F. Smith	9-61-0
9-11	Solubilities of the metals of group II in their chlorides.	Reactor DBareis	C. Lee	9-62-0
9-11	Solubility of alkaline earth metals in barium halides.	Reactor DBareis	C. Lee	9-63-0
9-11	$\sqrt{u}$ vs. log k.	Chemistry ALevy	C. Lee	9-64-0 and 9-65-0
9-11	$\sqrt{u}$ vs. log k/k_o.	Chemistry ALevy	C. Lee	9-66-0
9-11	$1/T \times 10^3$ vs. log k_o.	Chemistry ALevy	C. Lee	9-67-0
9-11	Time (minutes).	Chemistry ALevy	C. Lee	9-68-0
9-8	Time (minutes) vs. Percent water excreted.	Biology Edelmann	P. Simack	9-69-0 and 9-70-0
9-5	Slate 150. Nuclear Moments Laboratory.	Physics	R. J. Walton	9-71-0*
9-5	Slate 151. Chemistry Laboratory.	Chemistry	R. J. Walton	9-72-0

Date	Caption	Dept.	Photographer	Number
9-11	Well locations in Brookhaven area.	Geology LWeiss	C. Lee	9-73-0
9-11	Geologic cross section from A to A'. Geologic cross section from B to B'.	Geology LWeiss	C. Lee	9-74-0
9-11	Generalized columnar section in Brookhaven area.	Geology LWeiss	C. Lee	9-75-0
9-11	Relative abundance of the more Common microfossils in S6409.	Geology LWeiss	C. Lee	9-76-0
9-11	Edward Givinner, a patient in the children's ward at the BNL hospital, walking toward phonograph to put on a record. Ed has just become ambulatory. He is suffering from a kidney ailment.	Medical LFarr	R. F. Smith	9-77-0 and 9-78-0
9-11	Edward Givinner in the BNL hospital.	Medical LFarr	R. F. Smith	9-79-0
9-11	Edward Givinner, a patient in the BNL hospital.	Medical LFarr	R. F. Smith	9-80-0
9-11	Front view of secondary controller cubicle, showing the contacters for step starting the 1750 hp., 13.8 K.V. wound rotor inductor motor.	Cosmo AWise	R. J. Walton	9-81-0
9-11	Rear view of high spedd short circuiting switch; air closed, electrically opened.	Cosmo AWise	R. J. Walton	9-82-0
9-11	125 V. standby station battery and rectox rectifier.	Cosmo AWise	R. J. Walton	9-83-0
9-11	A.C. motor starting gear. Left to right - incoming line, starting breaker, surge protection, and secondary controller.	Cosmo AWise	R. J. Walton	9-84-0
9-11	Air conditioning intake, cooling, and duct work.	Cosmo AWise	R. J. Walton	9-85-0

Date	Caption	Dept.	Photographer	Number
9-11	Cosmotron building switchboard for power and lighting. This meters both sides of outdoor unit substation.	Cosmo AWise	R. J. Walton	9-86-0
9-11	Front view of high speed short circuiting switch; air closed, electrically opened.	Cosmo AWise	R. J. Walton	9-87-0
9-11	View of American Transformer Co. radio frequency power supply, 2400 V, A.C. induction regulator and 10 KV plate transformer.	Cosmo AWise	R. J. W lton	9-88-0
9-11	American Transformer Co. 300 KW, 10 KV radio frequency power supply.	Cosmo AWise	R. J. Walton	9-89-0
9-11	Interior front view of .5 million KVA interrupting capacity motor, starting breaker in test position.	Cosmo AWise	R. J. Walton	9-90-0
9-11	Rear view of American Transformer Co. radio frequency power supply .	Cosmo AWise	R. J. Walton 9-91-0	9-91-0
9-11	View of American Transformer Co. radio frequency power supply; 2400 V, A.C. in induction regulator and 10 KV plate transformer.	Cosmo AWise	R. J. Walton	9-92-0
9-11	Six 875-B rectifier tubes connected 3 phase full wave. American Transformer Co. Radio frequency power supply, front interior view.	Cosmo AWise	R. J. Walton	9-93-0
9-11	Rear view of secondary controller, bus arrangement.	Cosmo AWise	R. J. Walton	9-94-0
9-12	Walter Campbell using plastic tools to handle bottle of radio isotope.	HPhysics WCampbell	R. F. Smith	9-95-0
9-12	Plastic tools for handling isotopes in hot lab.	HPhysics WCampbell	R. F. Smith	9-96-0
9-18	Spectra with graphs copied from densitometer trace.	Electronic CNawrocki	M. H. Bull	9-97-0
9-18	Photographs of L. G. Smith's apparatus for publication.	Physics LGSmith	R. J. Walton	9-98-0 & 9-99-0

Date	Caption	Dept.	Photographer	Number
9-15	Progress photograph of radiatéd tradescantia plants.	Biology ASparrow	R. F. Smith	9-100-0 thru 9-104-0
9-19	Record photograph of patient in the children's ward of the BNL hospital for comparison and progress purposes.	Medical LFarr	R. F. Smith	9-105-0
9-19	Close-up of legs for comparison and progress purposes. Patient is youngster in the children's war d of the BNL hospital.	Medical LFarr	R. F. Smith	9-106-0
9-20	Graph of Orbits.	Physics EHafner	M. H. Bull	9-107-0
9-20	Diagram of apparatus.	Physics LGSmith	M. H. Bull	9-108-0
9-20	Time after exposure, hours vs. Relative specific activity.	Biology JSacks	P. Simack	9-109-0
9-30	Days after expsoure vs. Disintegrations per minute.	HPhysics FPCowan	P. Simack	9-110-0
9-21	Dr. A. Thorndike looking at "cloud chamber" which is enclosed in a wood shielding. Shield is supposed to keep out neutron background.	Physics CLChamber AThorndike	R. J. Walton	9-111-0
9-22	Copy of photograph of pulses.	Physics derMateosian	C. Lee	9-112-0
9-22	Diagrams of Apparatus.	Chemistry Bothner-By	C. Lee	9-113-0 and 9-114-0
9-22	Copy - Results of ovarian transplantation in guniea pigs. Ovaries from a small black guniea pig (fig.2) were transplanted into an albino (fig.3), which, mated with another albino (fig.4) produced black young(figs. 5-7).	Biology RSingleton	C. Lee	9-115-0
9-26	Tension testing a pole winding by suspending 6,890 lbs. of lead from it.	Cosmo JJMede	R. J. Walton	9-116-0 and 9-117-0

Date	Caption	Dept.	Photographer	Number
9-26	Tension testing a pole winding. Close-up of plastic section after a break.	Cosmo JJMede	R. J. Walton	9-118-0 and 9-119-0
9-14?	Strip of monitoring film from area survey station, 0-1.	HPhysics	Monsta	9-120-0
9-27	Particle Plate Camera. X-ray view.	Physics Hornbostel	R. F. Smith	9-121-0 9-21
9-29	Statex. 340A^{o}.	Physics RWeiss	P. Bennett	9-122-0
9-29	800 mesh diamond.	Physics RWeiss	P. Bennett	9-123-0
9-29	Vanadium.	RWeiss	P. Bennett	9-124-0
9-29	Neospectra 100 A^{o}.	Physics RWeiss	P. Bennett	9-125-0
9-29	Effect on $\bar{a}$ by immersion in D_2O.	Physics RWeiss	P. Bennett	9-126-0
9-29	Effect on $\sqrt{n}$ by varying path length of 200-325 mesh Bismuth (30 mil slit).	Physics RWeiss	P. Bennett	9-127-0
9-29	Total cross section for small angle scattering by spheres.	Physics RWeiss	P. Bennett	9-128-0
9-29	Effect on $\sqrt{n}$ by varying path length 200-325 mesh Bismuth/	Physics RWeiss	P. Bennett	9-129-0
9-29	Broadening vs. λ for 33 mm. Micronex.	Physics RWeiss	P. Bennett	9-130-0
9-29	Gaussian and experimental functions.	Physics RWeiss	P. Bennett	9-131-0
9-29	Effect of particle size on broadening using Bismuth of varying mesh numbers.	Physics RWeiss	P. Bennett	9-132-0
9-29	Effect on $\bar{a}$ by immersion in CS_2.	Physics RWeiss	P. Bennett	9-133-0
9-29	Effect of broadening on magnetization.	Physics RWeiss	P. Bennett	9-134-0

Date	Caption	Dept.	Photographer	Number
9-29	Gaussian, calculated, experimental functions.	Physics RWeiss	P. Bennett	9-135-0
9-29	Diagram of apparatus; pile shielding, etc.	Physisc RWeiss	P. Bennett	9-136-0
9-29	Statex 93 and Micronex.	Physics RWeiss	P. Bennett	9-137-0
9-29	Micronex - $2\frac{1}{2}$"/	Physics RWeiss	P. Bennett	9-138-0
9-29	Broadening vs. λ^2.	Physics RWeiss	P. Bennett	9-139-0
9-29	Effect of particle size on broadening using Bismuth of varying mesh numbers.	Physics RWeiss	P. Bennett	9-140-0
9-29	Effect of broadening on varying index of refraction.	Physics RWeiss	P. Bennett	9-141-0
9-22	As Mother Rat looks on, Dr. Abraham Edelmann, biologist, selects a healthy litter for a radiation experiment at BNL. Each rat cage is supplied with a food container (not shown), a bottle for supplying liquids , and a data sheet. After irradiation of the rats, careful studies are made to determine the effects of exposure. Such facts may be applied to the cause and treatment of radiation sickness, particularly in the event of atomic warfare. Learning basic facts about how radioactivity affects living matter can also be useful in improving methods of irradiating attacking cells (cancer) with the least possible damage to the normal cells.	Biology JBurt PRO	J. F. Garfieldd	9-142-0 and 9-143-0
9-22	Dr. Abraham Edelmann, biologist, and Mrs. Ruth Healy (in background), technician, conducting an experiment with metabolism cages. Metabolism is the process in which chemical substances, such as foodstuffs, are changed into tissue and energy. In this experiment, the metabolism of ordinary rats is compared with that of rats which have been exposed to radiation. (con't. next page)			

Date	Caption	Dept.	Photographer	Number
One e	One effect of such irradiation is that rats excrete administered water at an increased rate, as shown in the glass tubes below the three cages at the right. The three cages at the left contain rats which have not been irradiated. Such facts may be applied to the study of the cause and treatment of radiation sickness, and may be particularly useful in the event of atomic warfare. Basic facts about how r[illegible] radiation affects living matter can also be useful in improving methods of using it to attack cancer cells with least possible damage to normal cells.	Edelmann Biology (JBurt PRO)	J. F. Garfield	9-144-0
9-29	Revolving microscope ~~atge~~ stage for neutron counting.	HPhysics RRoth	J. F. Garfield	9-145-0
9-29	View of tradescantia plants in the radiation field. View looking southeast	Biology ASparrow	R. F. Smith	9-146-0
9-29	View of tradescantia plants in the radiation field. View looking west.	Biology ASparrow	R. F. Smith	9-147-0
9-25	Hot Co^{60} source in the hot lab.	Reactor LStang	J. F. Garfield	9-148-0 and 9-149-0
9-22	Close-up of rats used by Dr. Abraham Edelmann in his metabolism experiments.	Biology AEdelmann	J. F. Garfield	9-150-0
9-5	Slide No. A-2952-S 263	Biology Sparrow	R.F. Smith	9-151-0
9-5	Slide No. A-2910-T 262	Sparrow	R.F. Smith	9-152-0
9-5	Slide No. A-2150-P (A) 265	Sparrow	R.F. Smith	9-153-0
9-5	Slide No. A-2150-P (B) 266	Sparrow	R.F. Smith	9-154-0
9-5	Slide No. A-2150-) 264	Sparrow	R.F. Smith	9-155-0

October

Date	Caption	Dept.	Photographer	Number
10-3	Chlorophyll A.	Chemistry KSancier	C. Lee	10-1-0
10-3	Chlorophyll B.	Chemistyy KSancier	C. Lee	10-2-0
10-2	Main terminal box for the Cosmotron. Front view.	Cosmotron RKassner	R. F. Smith	10-3-0
10-2	Main terminal box for the Cosmotron. Rear view.	Cosmotron RKassner	R. F. Smith	10-4-0
10-4	Lawrence E. Fuller.	Portrait	APChristoffersen	10-5-0
10-6	Storage room for highly radio-active substances in the Hot Lab at BNL. The technician at the right is lowering a radioactive source inside a huge lead "pig" or container into a storage well which will be covered by a concrete floor slab one foot thick. Another technician is placing a smaller container of a substance low inradioactivity in one of the several storage compartments which are shielded by doors of steel 3 inches thick. These precautions reduce the radiation level in the room when large numbers of samples are in storage. Radioactive sources are frequently removed from storage for use in various types of experiments in the physical and life sciences. Some small individual samples can be transferred by hand, as shown, left, but special precautions are necessary in the storage of larger or more numerous samples.q	Reactor LStang	JFG & RJW	10-6-0
10-6	General view of the "semi-works" area designed to accommodate assembly of big experimental equipment in the Hot Lab at BNL. On the left is an equipment clean-up room where radioactive contamination can be removed from apparatus. In the foreground (Front and right) are a crane and a lift truck for movement of			

Date	Caption	Dept.	Photographer	Number
exp	experimental equipment. In the background is an experimental unit in preparation for chemical separation of radioisotopes. When this equipment is all set up it will be moved to a wall chamber known as a "hot cell", for radioactive experiments behind steel doors. At the right (figure on platform) is a test unit for concentration of large quantities of radioactive waste materials. Along the ceiling is a duct for supplying conditioned air to this part of the building. All service piping is specially jacketed and the floor is covered with special plastic tile to facilitate decontamination.	Reactor LStang	JFG & RJW	10-7-0
1-0-5	Eight Tradescantia plants, showing effects of radiation of varying intensities.	Biology ASparrow	R. F. Smith	10-8-0
10-10	Graph of Orbits.	Physics VdeGraaff EHafner	M. H. Bull	10-9-0
10-10	Microwave Spectroscope.	Physics VWCohen	Phil Bennett	10-10-0
10-5	Thyroid cancer patient in the hospital; young female, Joanie Posarrn.	Medical CGFoster	J. F. Garfield	10-11-0 & 10-12-0
10-5	Thyroid cancer patient in the hospital; older woman, Brdiget Whalen.	Medical CGFoster	J. F. Garfield	10-13-0 & 10-14-0
10-5	Back of thyroid cancer patient in the BNL hospital.	Medical CGFoster	J. F. Garfield	10-15-0 & 10-16-0
10-13	Diagram of Apparatus.	Chemistry Bigeleisen	P. Simack	10-17-0
10-13	Graph. f vs. % Error in k'/k-1.	Chemistry Bigeleisen	P. Simack	10-18-0

Date	Caption	Dept.	Photographer	Number
10-13	Graph $1/T \times 10^3$ vs. k_1/nk_3^{-1}.	Chemistry Bigeleisen	P. Simack	10-19-0
10-13	Graph -log (1-f) vs. Time in hours.	Chemistry Bigeleisen	P. Simack	10-20-0
10-13	Graph -log (1-f) vs. log (1 plus $\frac{N_{x}o - N_x}{N_{x}o}$ times $\frac{f}{1-f}$	Chemistry Bigeleisen	P. Simack	10-21-0
10-13	Diagram of apparatus with sodium trichloracetate solution in bottle.	Chemistry Bigeleisen	P. Simack	10-22-0
10-50	Winners of the 1950 Softball League - Fiscal.	Fiscal FJones	J. F. Garfield	10-23-0
10-16	Two exterior views of the Cyclotron Van de Graaff Building.	VdGraaff Cyclotron	JFG & RJW	10-24-0 and 10-25-0
10-19	<u>E.coli</u> 3 hours.	Biology BRubin	R. F. Smith	10-26-0
10-19	Ears of corn.	Biology Singleton	M. H. Bull	10-27-0
10-19	Corn.	Biology Singleton	M. H. Bull	10-28-0
10-50	Various views of the small Meteorology tower.	Meteor. Bohnhorst	Meteorology	10-29-0 thru 10-35-0
10-18	Irradiated ears of corn.	Biology Singleton	J. F. Garfield	10-36-0
10-18	Irradiated corn plants.	Biology Singleton	J. F. Garfield	10-37-0 and 10-38-0
10-20	Evaporating units in vault of the hot laboratory.	Reactor Horrigan	R. J. Walton	10-39-0 thru 10-43-0

Date	Caption	Dept.	Photographer	Number
10-20	Inside of Cyclotron "Dee" through the periscope.	Cyclotron HWhalen	R. J. Walton	10-44-0 A thru 10-44-0 D
10-20	Inside of Cyclotron "Dee" through the periscope.	Cyclotron JWhalen	R. J. Walton	10-45-0 A thru 10-45-0 E
10-20	Inside of Cyclotron "Dee" through the periscope.	Cyclotron JWhalen	R. J. Walton	10-46-0 A thru 10-46-0 D
10-20	Inside of Cyclotron "Dee" through the periscope.	Cyclotron JWhalen	R. J. Walton	10-47-0 A thru 10-47-0 F
10-20	Inside of Cyclotron "Dee" through the periscope.	Cyclotron JWhalen	R. J. Walton	10-48-0 A thru 10-48-0 C
10-50	Control panel for waste area of the Hot Lab at BNL. This is the control board for the waste tanks shown in 10-76-0. The instruments measure the liquid loads, temperatures, and densities of the waste solutions in several underground tanks. The valve manifolds control the transfer of liquids to the permanent storage tansk.	Reactor LStang	J. F. Garfield	10-49-0
10-50	Technician in the counting room in the Hot Lab determining the exact amount of radioactivity in a sample. The sample is placed in one of the lead cylinders where Geiger counters detect and measure the number of rays or particles ~~inside-the-oblong-sealers~~. given off. The data is recorded and indicated by the electronic equipment inside the oblong scalers.	Reactor LStangq	J. F. Garfield	10-50-0
10-50	Technician placing eggs in the cobalt source which are to irradiated.	Reactor LStang	J. F. Garfield	10-51-0
10-50	A technician in the Hot Lab collecting a sample of liquid waste for analysis of the radioactive contrent. This type of sampling makes possible a careful check on disposal of radioactivity which must be strictly limited at all times. The sampking lines connect with underground storage and control vessels.	Reactor LStang	J. F. Garfield	10-52-0

Date	Caption	Dept.	Photographer	Number
10-50	A scientist prepares a source of radioactive Cobalt 60 for an experiment in the Hot Lab. To protect himself from radiation given off by the source, he takes several precautions. He wears the white jacket and the cap as safeguards against contamination, while the badge and small cylinder on the cap measure the exact amount of radiation to which he has been exposed. The barrier of brick shields protects him from radiation from the source inside the "hot cave", and the tomgs and mirrors enable him to work at a safe distance. The electric battery supplies power to an electromagnet on the end of the rod, with which he will position the source for use.	Reactor LStang	J. F. Garfield	10-54-0 and 10-53-0
10-50	A techncian in the Hot Lab checking the cleanliness of glassware used for handling radioactive materials. After intensive washing and scrubbing removal of contamination is verified by surveying the glassware with a Geiger counter, which detects and counts rays and particles given off by disintegration of any remaining radioactive elements.	Reactor LStang	J. F. Garfield	10-56-0 and 10-55-0
10-50	A technician in the Hot Lab collecting a sample of liquid waste for analysis of the radioactive content. This type of sampling makes possible a careful check on disposal of radioactivity which must be strictly limited at all times. The sampling lines connect with underground storage and control vessels.	Reactor LStang	J. F. Garfield	10-57-0
10-50	Technician checking the cobalt sourcwe in the Hot Lab.	Reactor LStang	J. F. Garfield	10-58-0
10-50	Control panel for waste area in the Hot Lab. This is the control board for the waste tanks shown in 10-76-0/ The instruments measure the liquid loads, tem temperatures, and densities of the waste solution inseveral underground tanks. The valve manifolds control the transfer of liquids to the permanent storage tanks.	Reactor LStang	J. F. Garfield	10-59-0

Date	Caption	Dept.	Photographer	Number
10-50	Typical laboratory set-up in the cold area of the Hot Lab at BNL.	Reactor LStang	J. F. Garfield	10-60-0
10-50	A scientist prepares a source of radioactive Cobalt 60 for an experi- ment in the Hot Lab at BNL. To protect himself from radiation given off by the source, he takes several precautions. He wears the white jacket and the cap as safeguards against contamination, while the badge and small cylinder on the cap measure the exact amount of radiation to which he has been exposed. The barrier of brick shields ~~him~~ protects him from radiation from the source inside the "hot cave", and the tongs and mirrors enable him to work at a safe distance. The electric battery supplies power t to an electromagnet on the end of the rod, with which he will position the source for use.	Reactor LStang	J. F. Garfield	10-61-0
10-20	Photomicrograph of <u>E. coli</u> - 1½ hours. Neg. Mag. 2200X Print Mag. 5000X.	Biology BRubin	R. F. Smith	10-62-0 thru 10-68-0
10-24	<u>Graphs</u> Millimicrons vs. o.d.	Chemistry ALevy	Phil Bennett	10-69-0
10-50	View through the periscope in the Hot Lab.	Reactor LStang	J. F. Garfield	10-70-0
10-50	Scene in the high level waste area of the Hot Lab. An elaborate network of tanks and pipes is necessary for control of radioactive liquids result- ing from experiments with radioisotopes. Located underground in front of the Laboratory, the room cannot be entered after the Laboratory is in full operation without an extended shutdown because of the radioactivity of the materials in the tanks. For this reason instruments have been installed to detect leakage, with periscopes available to permit inspection of the equipment from the control room above.	Reactor LStang	J. F. Garfield	10-71-0

Date	Caption	Dept.	Photographer	Number
10-50	View of part of the waste area of the Hot Lab at BNL. The feed pipes of various sizes are connected to the four drum-like "scrubbing" towers which are used for cleaning part of the exhaust air from the Hot Lab conditioning system.	Reactor LStang	J. F. Garfield	10-72-0
10-50	Preparation of an experimental unit for chemical separation of radioisotopes in the Hot Lab at BNL. When the apparatus is ready, it is placed in a wall chamber or "hot cell" where steel doors one-foot thick seal it off. Next, the radioactive material to be separated is introduced. Scientists can then operate the equipment by remote control instruments outside, observing results through periscopes. By mounting the apparatus on a mobile panel, all equipment can be pre-assembled and pretested as a complete unit in another room before placement in a cell, and then removed to a special room for decontamination, after its work is done. Thus, no time is lost between experiments in the cell itself. These "hot cells" were designed for particularly exact research problems and contain many special features which facilitate the assembly and replacement of equipment.	Reactor LStang	J. F. Garfield	10-73-0 thru 10-75-0
10-50	Scene in the high level waste area of the Hot Lab at BNL. An elaborate network of tanks and pipes is necessary for control of radioactive liquids resulting from the experiments with radioisotopes. Located underground in front of the Lab, the room cannot be entered after the Lab is in full operation without an extended shutdown because of the radioactivty of the materials in the tanks. For this reason instruments have been installed to detect leakage, with periscopes available to permit inspection of the equipment from the control room above.	Reactor LStang	J. F. Garfield	10-76-0

Date	Caption	Dept.	Photographer	Number
10-26	Close-up view of Ion Source.	Physics EHays	R. J. Walton	10-77-0 and 10-78-0
10-23	View taken through sighting posts of wasted evaporator, showing water particles.	Hot Lab Horrigan	R. J. Walton	10-79-0 and 10-80-0
10-30	Stan Kramer holding radiation counter.	Electronic SKramer	R. F. Smith	10-81-0
10-30	Radiation counter for civilian defense.	Electronic SKramer	R. F. Smith	10-82-0
10-30	Interior view of radiation counter for civilian defense.	Electronic SKramer	R. F. Smith	10-83-0
10-30	Van de Graaff generator for the Cosmotron.	Cosmotron.	R. J. Walton	10-84-0
10-30	Exterior view of the Cosmotron Building from the west.	Cosmotron	R. J. Walton	10-85-0
10-27	Using assembly line procedure to put twenty-four chassis together for the Cosmotron power supply.	Cosmotron Dexter	R. J. Walton	10-86-0 and 10-87-0
10-25	Group of six Tradescantia plants.	Biology ASparrow	R. F. Smith	10-88-0
10-25	Tradescantia plants. #248 and #249.	Biology ASparrow	R. F. Smith	10-89-0
10-25	Tradescantia plants. #258 and #259.	Biology ASparrow	R. F. Smith	10-90-0
10-25	Tradescantia plants. #268 and #269,	Biology ASparrow	R. F. Smith	10-91-0
10-25	Tradescantia plants. #306 and #307.	Biology ASparrow	R. F. Bmith	10-92-0
10-25	Tradescantia plants. #308 and #309.	Biology ASparrow	R. F. Smith	10-93-0

November

Date	Caption	Dept.	Photographer	Number
11-1	Display board of wind traces October 2, 1950, on 18', 37', 75', and 150' booms on Ace.	Meteorology ABelfour	M. H. Bull	11-1-0
11-2	Tilting Stage Microscope for Nuclear Tracks. (Front view).	Physics EOSalant	R. F. Smith	11-2-0
11-2	Tilting Stage Microscope for Nuclear Tracks. (3/4 view).	Physics EOSalant	R. F. Smith	11-3-0
11-2	Tilting Stage Microscope for Nuclear Tracks (rear view).	Physics EOSalant	R. F. Smith	11-4-0
11-3	Bismuth - Block A.	Physics GJohnson	R. F. Smith	11-5-0
11-3	Bismuth - Block B.	Physics GJohnson	R. F. Smith	11-6-0
11-2	Warning monitor light circuit.	Cosmotron LRedmond	R. J. Walton	11-7-0 and 11-8-0
11-2	Rarallel wire lens power supply.	Cosmotron LRedmond	R. J. Walton	11-9-0
11-2	Modifier model 50 power supply.	Cosmotron LRedmond	R. J. Walton	11-10-0
11-2	Injection system motor control panel.	Cosmotron LRedmond	R. J. Walton	11-11-0
11-2	Injection motor control relay.	Cosmotron LRedmond	R. J. Walton	11-12-0
11-2	Parallel wire lens power supply.	Cosmotron LRedmond	R. J. Walton	11-13-0
11-2	Modifier model 50 power supply.	Cosmotron LRedmond	R. J. Walton	11-14-0
11-2	Injection motor control relays.	Cosmotron LRedmond	R. J. Walton	11-15-0
11-2	Injection system motor control panel.	Cosmotron LRedmond	R. J. Walton	11-16-0

Date	Caption	Dept.	Photographer	Number
111-2	Inflector voltage control to metering.	Cosmotron LRedmond	R. J. Walton	11-17-0 and 11-18-0
11-2	Warning monitor light circuit.	Cosmotron LRedmond	R. J. Walton	11-19-0 and 11-20-0
	**Negative number 11-21-0 deleted November 14, 1950. Mistake on original negative. Refer to negative number 11-52-0.			
11-6	Internal conversion lines of Mo^{93}? (7h) - 256 Kev.	Physics derMateosian	A. R. Lasky	11-22-0
11-6	Internal transitions of Ta^{181} following the decay of Hf^{181} (46d) and W^{181} (140d).	Physics DerMateosian	A. R. Lasky	11-23-0
11-6	0.66 Mev. gamma-ray of Cs^{137} as seen with Scintillation Spectrometer with 10% resolution.	Physics derMateosian	A. R. Lasky	11-24-0
11-6	31 Kev. gammma-ray and K x-rays of W^{181} (140d) as seen with proportional counter. The K-rays on the left for comparison.	Physics derMateosian	A. R. Lasky	11-25-0
11-6	Isomers of Hf^{181} (5.5h, 46d). 1 hour old 3 days old 1 year old.	Physics derMateosian	A. R. Lasky	11-26-0
11-6	Compsoite of Pulses.	Physics derMateosian	A. R. Lasky	11-27-0
11-6	Discriminator Volts vs. Delayed Coincidences/min. Yb^{169} x-gamma coincidences.	Physics ASunyar	A. R. Lasky	11-28-0 and 11-29-0
11-6	Delay in mu-seconds vs. Coincidence Rate/min. Yb^{169} x-gamma coincidences.	Physics ASunyar	A. R. Lasky	11-30-0
11-7	Close-up of Tradescantia cluster.	Biology ASparrow	R. F. Smith	11-31-0

Date	Caption	Dept.	Photographer	Number
	11-32-0, NO NEGATIVE			
11-7	Close-up of two tradescantia clusters.	Biology ASparrow	R. F. Smith	11-33-0
11-7	View of five tradescantia plants.	Biology ASparrow	R. F. Smith	11-34-0
11-7	Close-up of tradescantia clusters.	Biology ASparrow	R. F. Smith	11-35-0
11-6	Diagram of Apparatus.	Biology RSteele	A. R. Lasky	11-36-0
11-6	H. C. 60 years male Weight equals 70.9 kg.	Medical Robertson	A. R. Lasky	11-37-0
11-6	S. H. 2 10/12 years male Weight equals 16.9 kg.	Robertson Medical	A. R. Lasky	11-38-0
11-6	T. G. 36 years male Weight equals 88.4 kg.	Medical Robertson	A. R. Lasky	11-39-0
11-6	The course of the volume of distribution (V) of a hypothetical ideal substance calculated from IV and P.	Medical Robertson	A. R. Lasky	11-40-0
11-6	The course of the volume of distribution (V) of a substance which is rapidly excreted as calculated from IV, UV, and P.	Medical Robertson	A. R. Lasky	11-41-0
11-7	Double Crystal Spectrometer.	Reactor VSailor	JFG & RJW	11-42-0 and 11-43-0
11-6	BNL Bivane test at New York University wind tunnel, January 25, 1950.	Meteor. Mazzarella	A. R. Lasky	11-44-0
11-6	Bivane Wind Tests: Tunnel speed Initial displacement Period.	Meteor. Mazzarella	A. R. Lasky	11-45-0
11-6	Schematic Drawings of Bivane Aerovane.	Metoer. Mazzarella	A. R. Lasky	11-46-0 and 11-47-0

Date	Caption	Dept.	Photographer	Number
11-6	Schematic Drawings of Bivane Aerovane.	Meteor. Mazzarella	M. Herbert	11-48-0 and 11-49-0
11-9	Rear view of memory circuit and associated power supply.	Cosmotron LRedmond	R. J. Walton	11-50-0
11-9	Front view of memory circuit and associated power supply.	Cosmotron LRedmond	R. J. Walton	11-51-0
11-13	Uptake of phosphorus as a function of total phosphate in culture medium. (Use of P^{32} and I^{131} tracers).	Biology BRubin	Philip Bennett	11-52-0
11-15	High preesure diffusion cloud chamber. Dr. Earle C. Fowler looking in.	Physics EFowler	R. J. Walton	11-53-0
11-15	Eight lily bulbs, six irradiated and two controls.	Biology ASparrow	R. F. Smith	11-54-0
11-15	Row of eight tradescantia plants showing the effects of varying doses of radiation.	Biology' ASparrow	R. F. Smith	11-55-0
11-15	Tradescantia Plants.	Biology ASparrow	R. F. Smith	11-56-0
11-15	Close-up of Tradescantia Plants.	Biology ASparrow	R. F. Smith	11-57-9
11-16	Decay Scheme for K^{40}.	Reactor LBBorst	P. ,Simack	11-58-0
11-13	Approach to railroad bridge from the south.	AP & PM GAhlers	R. J. Walton	11-59-0
11-13	Approach to the railroad bridge from the north.	AP & PM GAhlers	R. J. Walton	11-60-0
11-13	Exposed curbing on southwest side of the railroad bridge.	AP & PM GAhlers	R. J. Walton	11-61-0
11-13	Train under the railraod bridge, showing clearance of the supports.	AP & PM GAhlers	R. J. Walton	11-62-0
11-13	Rotted out supports timber under the railraad bridge.	AP & PM GAhlers	R. J. Walton	11-63-0

Date	Caption	Dept.	Photographer	Number
21-13	Plumb bob set to show angle to which north abutment of the railroad bridge has tilted.	AP & PM GAhlers	R. J. Walton	11-64-0
11-13	Dirt fill fallen away from the railroad bridge abutment on southeast side.	AP & PM GAhlers	R. J. Walton	11-65-0
11-13	Depression in surface of the railroad bridge roadway.	AP & PM GAhlers	R. J. Walton	11-66-0
11-13	Depression in surface of the roadway on the railroad bridge.	AP & PM GAhlers	R. J. Walton	11-67-0
11-13	Flat of Tradescantia Plants.	Biology ASparrow	R. J. Walton	11-68-0
11-13	Tradescantia Buds.	Biology ASparrow	R. J. Walton	11-69-0
11-17	Plan view showing arrangement for the simulated beam experiment.	Physics EFowler	P. Simack	11-70-0
11-17	A continuously sensitive diffusion cloud chamber.	Physics EFowler	P. Simack	11-72-0
11-17	Field Configuration at Tube End.	Cyclotron Turner	P. Simack	11-72-0
11-17	Comparison of G.E. Tube and HVEC - Herb Tube.	Cyclotron Turner	P. Simack	11-73-0
11-17	Tube behavior at various pressures of 6" stainless steel electrode tube.	Cyclotron Turner	P. Simack	11-74-0
11-17	Heated Probe Experiment.	Cyclotron Turner	P. Simack	11-75-0
11-17	Electron loading threshold vs. Number electrons in added gases.	Cyclotron Turner	P. Simack	11-76-0
11-17	Electron loading threshold vs. Mass of various added gases.	Cyclotron Turner	P. Simack	11-77-0
11-17	X-Ray absorption curve G. E. electrostatic accelerator Voltage 1.8 MV - no beam.	Cyclotron Turner	P. Simack	11-78-0
11-17	Electron loading current vs. Voltage.	Cyclotron Turner	P. Simack	11-79-0

Date	Caption	Dept.	Photographer	Number
11-17	Electron loading threshold vs. Pressure of various gases.	Cyclotron Turner	P. Simack	11-80-0
11-17	Needle Probe Experiment.	Cyclotron Turner	P. Simack	11-81-0
11-17	Electron Load Characteristics.	Cyclotron Turner	P. Simack	11-82-0
11-17	Graph. θ_c^2 (min^2) vs. $\frac{I_s}{I_T}$ arbitrary units.	Physics RWeiss	P. Simack	11-83-0
11-17	Graph. Square root of path length $\sqrt{l}$ (inches)$^{1/2}$ vs. $\sqrt{\omega^2 - \omega_0^2}$ (mm).	Physics RWeiss	P. Simack	11-84-0
11-17	Graph $\sqrt{n}$ (no. of particles traversed)$^{1/2}$ vs. $\sqrt{\omega^2 \omega_0^2}$ (mm)	Physics RWeiss	P. Simack	11-85-0
11-17	Graph $\frac{d\sqrt{\sigma}}{A}$ vs. $\sqrt{w_0^2 - w_0^2}$ mm.	Physics RWeiss	P. Simack	11-86-0
11-16	Microwave Frequency Standard.	Physics VWCohen	H. Maile	11-87-0
11-20	Equations: l_1 equals O-C Distance. l_2 equals C-S Distance.	Physics VWCohen	H. Maile	11-88-0
11-20	Internuclear Distances.	Physics VWCohen	H. Maile	11-89-0
11-20	Equations (using Davison's).	Physics VWCohen	H. Maile	11-90-0
11-20	Potential Distribution.	Cosmotron JBlewett	P. Simack	11-91-0
11-20	Van de Graaff Data.	Cosmotron JBlewett	P. Simack	11-92-0
11-20	Diagram showing steel electrodes.	Cosmotron JBlewett	P. Simack	11-93-0
11-20	Graphs. Plots of mm. gaps.	Cosmotron JBlewett	P. Simack	11-94-0

Date	Caption	Dept.	Photographer	Number
11-20	Graph	Cosmotron JBlewett	P. Simack	11-95-0
11-20	Equations.	Physics RWeiss	P. Simack	11-96-0
11-20	Diagram of Shield and BF_3 Counter.	Physics Pasternak	P. Simack	11-97-0
11-20	Iron T equals 300 °K.	Physics Kleinman	H. Maile	11-98-0
11-20	Equations and Graphs.	Physics Kleinman	P, Simack	11-99-0 thru 11-101-0
11-20	Graphs. Plot the boundary and planimeter the area. The calibration is the square.	Physics KLeinman	P. Simack	11-102-0
11-20	One Phonon Cross Section of Lead. T equals 315 °K.	Physics Kleinman	P. Simack	11-103-0
11-20	Neutron Energy °K Iron T equals 315 °K.	Physics Kleinman	P. Simack	11-104-0
11-20	Lead - E °K.	Physics Kleinman	P. Simack	11-105-0
11-20	Iron Temperature - °K.	Physics Kleinman	P. Simack	11-106-0
11-20	One Phonon Cross Section of Lead. T equals 300 °K.	Physics Kleinman	P. Simack	11-107-0
11-20	One Phonon Cross Section of Iron T equals 300 °K.	Physics Kleinman	P. Simack	11-108-0
11-17	Layout of equipment of smoke reading: Pocket scope Rectifier Smoke densitometer and coil of wire.	Electronic RDvorak	R. J. Walton	11-109-0

Date	Caption	Dept.	Photographer	Number
11-17	Smoke Densitometer.	Electronics RVDvorak	R. J. Walton	11-110-0 and 11-111-0
11-17	Scope trace of smoke density.	Electronics RVDvorak	R. J. Walton	11-112-0
11-20	Pulse Height vs. Counts/2 minutes.	Physics ASunyar	H. Maile	11-113-0
11-20	Pulse Height vs. Counts/minute.	Physics ASunyar	H. Maile	11-114-0
11-20	Decay Scheme for Yb^{169}.	Physics ASunyar	H. Maile	11-115-0
11-20	Diagrams of Apparatus.	Physics LGSmith	H. Maile	11-116-0 and 11-117-0
11-20	Particle Localizer.	Cosmotron Yuan	H. Maile	11-118-0
11-20	Position between photo tubes in inches vs. Angle of trace in degrees.	Cosmotron Yuan	H. Maile	11-119-0
11-20	BNL Model Railroad set-up.	BERA RVogt2	R. J. Walton	11-120-0
11-20	Bivane Trace of Portow Type.	Meteor. Mazzarella	H. Maile	11-121-0
11-20	A comparison of the periods of three vanes.	Meteor. Mazzarella	H. Maile	11-122-0
11-20	Brookhaven Bivane Response Curve.	Meteor. Mazzarella	H. Maile	11-123-0
11-20	Brookhaven Bivane Wind Tunnel Test of 25 Jan. 1950.	Meteor. Mazzarella	H. Maile	11-124-0
11-20	Portow Type Bivane Traces.	Meteor. Mazzarella	H. Maile	11-125-0
11-20	Equation representing motion of the Brookhaven Bivane.	Metoer. Mazzarella	H. Maile	11-126-0
11-20	Schematic diagram of connections for the Brookhaven Bivane.	Meteor. Mazzarella	H. Maile	11-127-0

Date	Caption	Dept.	Photographer	Number
11-20	Traces Tunnel Speed Initial Displacement Period.	Meteor. Mazzarella	H. Maile	11-128-0
11-20	Bivane Vertical Trace Horizontal Trace.	Meteor. Mazzarella	H. Maile	11-129-0
11-20	Traces - 355' Aerovane Bivane Horizontal Bivane Vertical.	Metoer. Mazzarella	H. Maile	11-130-0
11-21	Instructions for balancing vane assembly.	Meteor. Mazzarella	H. Maile	11-131-0
11-21	Iron T equals 315 ^{o}K	Physics Kleinman	P. Simack	11-132-0
11-21	Position between photo tubes in inches vs. Angle of trace in degrees.	Cosmotron Yuan	P. Simack	11-133-0
11-21	Dr. Miller with simple cloud chamber.	PRO JBurt	R. F. Smith	11-134-0
11-21	Placing top plate on cloud chamber.	PRO JBurt	R. F. Smith	11-135-0
11-21	Placing glass cylinder of cloud chamber in position.	PRO JBurt	R. F. Smith	11-136-0
11-21	Photomacrograph of Trillium bud cross section.	Biology MMoses	R. F. Smith	11-137-0 thru 11-142-0
11-22	Electron Spectrum of Yb^{169} (33 day). (11-143-0A was 11-143-0) (11-143-0B was 11-144-0)/	Physics JMihelich	M. H. Bull	11-143-0 A and 11-143-0 B
11-18	Insulation in refrigeration room in the Hot Lab.	Hot Lab LStang	J. F. Garfield	11-148-0
11-18	The 72 curie Co^{60} source for research in the Hot Lab.	Hot Lab LStang	J. F. Garfield	11-145-0 and 11-144-0

Date	Caption	Dept.	Photographer	Number
11-18	72 Curie Co^{60} source in the Hot Lab.	Hot Lab LStaNg	J. F. Garfield	11-146-0
11-29	Photomicrograph of Trillium bud. Q1-1 & 2.	Biology MMoses	R. F. Smith	11-147-0
11-29	Photomicrograph of Trillium bud. Q1-3 & 4.	Biology MMoses	R. F. Smith	11-148-0
11-29	Photomicrograph of Trillium bud. Q1-5 & 6.	Biology MMoses	R. F. Smith	11-149-0
11-29	Photomicrograph of Trillium bud. Q1-7 & 8.	Biology MMoses	R. F. Smith	11-150-0
11-29	Photomicrograph of Trillium bud. Q1-9 & 10.	Biology MMoses	R. F. Smith	11-151-0
11-29	Photomicrograph of Trillium bud. Q2-1.	Biology MMoses	R. F. Smith	11-152-0
11-29	Photomicrograph of Trillium bud. Q2-2.	Biology MMoses	R. F. Smith	11-153-0
11-29	Photomicrograph o f Trillium bud. Q2-3.	Biology MMoses	R. F. Smith	11-154-0
11-29	Photomicrograph of Trillium bud. Q2-4.	Biology MMoses	R. F. Smith	11-155-0
11-29	Photomicrograph of Trillium bud. Q2-5.	Biology MMoses	R. F. Smith	11-156-0
11-29	Photomicrograph of Trillium bud. Q2-6.	Biology MMoses	R. F. Smith	11-157-0
11-29	Photomicrograph of Trillium bud. Q2-7.	Biology MMoses	R. F. Smith	11-158-0
11-28	Setting last coil section in place on #2 quadrant of the Cosmotron.	Cosmotron JKosh	R. J. Walton	11-159-0
11-18	Eyepiece projected directly on film.	Hot Lab LStang	J. F. Garfield	11-160-0
11-18	Refocused image without eyepiece.	Hot Lab LStang	J. F. Garfield	11-161-0
11-30	Macro photo of abnormal leaf on tradescantia plant.	Biology ASparrow	R. F. Smith	11-162-0

Date	Caption	Dept.	Photographer	Number
11-2	Slide No. A-3087-G 268	Biology Sparrow	R.F. Smith	11-163-0
11-6	Slide No. A-3038-E 269	Sparrow	R.F. Smith	11-164-0
11-17	Neutron Physics Party	Physics	J.F. Garfield	11-165-0
11-17	Group of Neutron Physicists	"	"	11-166-0
11-17	" " " "	"	"	11-167-0
11-	Portrait Mrs G. Goldhaber	Goldhaber	J.F. Garfield	11-168-0

December

Date	Caption	Dept.	Photographer	Number
12-1	Epitaxy of Sodium Chloride on Silver.	Physics GJohnson	M. H. Bull	12-1-0
12-5	Days vs. Decrease in Life Expectancy (Days) Days vs. Increase in Adrenal Extract.	Biology Edelmann	M. H. Bull	12-2-0
12-5	Comparison of X-Ray inhibition in Haploid (1 N) and Tetraploid (4 N) nuclei.	Biology ASparrow	M. H. Bull	12-3-0
12-5	Relationship between inhibition, chromosome fragmentation, and X-ray dosage in Trillium.	Biology ASparrow	M. H. Bull	12-4-0
12-5	Microsporogenesis in Trillium. (Approximate times in days at 4-6°C.)	Biology ASparrow	M. H. Bull	12-5-0
12-5	Relationship between fragmentation and inhibition of microspore division. (Plant exposed to 50 r).	Biology ASparrow	M. H. Bull	12-6-0
12-5	Dosage in Roentgens vs. No. of fragments induced per haploid nucleus.	Biology ASparrow	M. H. Bull	12-7-0
12-6	Star Track. Without Background.	Physics EOSalant	R. F. Smith	12-8-0
12-6	Star Track. With Background.	Physics EOSalant	R. F. Smith	12-9-0
12-6	Aluminum Tubing Heat Test. Type 7.	Reactor FIseli	R. J. Walton	12-10-0
12-6	Aluminum Tubing Heat Test. Specimen #14.	Reactor FIseli	R. J. Walton	12-11-0
12-6	Aluminum Tubing Heat Test. Type 2.	Reactor FIseli	R. J. Walton	12-12-0
12-6	Aluminum Tubing Heat Test. Type 8.	Reactor FIseli	R. J. Walton	12-13-0
12-6	Aluminum Tubing Heat Test. Specimen #18.	Reactor FIseli	R. J. Walton	12-14-0
12-6	Aluminum Tubing Heat ~~Phy~~ Test. Specimen #4.	Reactor FIseli	R. J. Walton	12-15-0

Date	Caption	Dept.	Photographer	Number
12-6	Aluminum Tubing Heat Test. Type 1.	Reactor FIseli	R. J. Walton	12-16-0
12-6	Graphite Machine Shop. 24" planer shaping graphite blocks to be used in the reactor.	PRO JBurt	R. J. Walton	12-17-0 and 12-18-0
12-6	Normal mutation of Tradescantia plant.	Biology ASparrow	R. F. Smith	12-19-0
12-8	Aerovane Trace.	Meteorology ABelfour	M. H. Bull	12-20-0
12-7	Periscope set-up in the Hot Lab.	Hot Lab LStang	JFG & RJW	12-21-0
12-7	Close-up of hot cell door.	Hot Lab LStang	JFG & RJW	12-22-0
12-7	Periscope arrangement.	Hot Lab LStang	JFG & RJW	12-23-0
12-7	Stang Reactor Vessel.	Hot Lab LStang	JFG & RJW	12-24-0
12-11	Composite of Pulses.	Physics SGoudsmit	P. Simack	12-25-0
12-11	Copies from <u>Analytical Chemistry</u>, June, 1950.			
12-11	Figure 5. Titration of Acetic Acid.	Chemistry Finson	P. Simack	12-26-0
12-11	Figure 4. Effect of frequency on titration of sulfuric acid.	Chemistry Finson	P. Simack	12-27-0
12-11	Figure 6. Titration of sodium chloride with silver nitrate.	Chemistry Finson	P. Simack	12-28-0
12-11	Figure 7. Obtainable Precision.	Chemistry Finson	P. Simack	12-29-0
12-11	Figure 2. High-Frequency Titrimeter.	Chemistry Finson	P. Simack	12-30-0
12-11	Figurel. High-Frequency Titrimeter.	Chemistry Finson	P. Simakc	12-31-0

Date	Caption	Dept.	Photographer	Number
12-12	Normal Tradescantia stem and leaf formation.	Biology ASparrow	R. F. Smith	12-32-0
12-12	Normal Tradescantia buds and flowers.	Biology ASparrow	R. F. Smith	12-33-0
12-12	Normal Tradescantia buds.	Biology ASparrow	R. F. Smith	12-34-0
12-14	Macro photo of Trillium section. Q3 - section 1.	Biology MMoses	R. F. Smith	12-35-0
12-14	Macro photo of Trillium section. Q3 - section 2.	Biology MMoses	R. F. Smith	12-36-0
12-14	Macro photo of Trillium section. Q3 - section 3.	Biology MMoses	R. F. Smith	12-37-0
12-14	Macro photo of Trillium section. Q3 - section 4.	Biology MMoses	R. F. Smith	12-38-0
12-14	Macro photo of Trillium section. Q3 - section 5.	Biology MMoses	R. F. Smith	12-39-0
12-14	Macro photo of Trillium section. Q3 - section 6.	Biology MMoses	R. F. Smith	12-40-0
12-14	Macro photo of Trillium section. Q3 - section 7.	Biology MMoses	R. F. Smith	12-41-0
12-15	Graph. . equals 5.5 meters. x equals 0.0 meters.	Physics OPiccioni	P. Simack	12-42-0
12-15	Showers with $\geq$ n counters discharged versus n.	Physics OPiccioni	P. Simack	12-43-0
12-15	Graph. AS O-Hilberry AS X - V-cocconi.	Physics OPiccioni	P. Simack	12-44-0
12-15	Ordinate: Rate X (pressure)$^{-3}$	Physics OPiccioni	P. Simack	12-45-0
12-18	Aerovane Trace. Wind Speed, 9/18/50, 0415 to 0815.	Meteorology ABelfour	M. H. Bull	12-46-0

Date	Caption	Dept.	Photographer	Number
12-12	Health Physics lab coats being monitored after cleaning.	PRO JBurt	R. J. Walton	12-47-0
12-15	Junction box for the Cosmotron.	Cosmotron RKassner	R. J. Walton	12-48-0 and 12-49-0
View of	assembled pump for			
12-15	View of assembled pump for active liquids.	Reactor CWilliams	R. J. Walton	12-50-0
12-15	Exploded view of leakproof pump, to be used for active liquids.	Reactor CWilliams	R. J. W lton	12-51-0 and 12-52-0
12-14	Four pump master control.	Cosmotron LRedmond	R. J. Walton	12-53-0
12-14	Communication control. 2	Cosmotrmn LRedmond	R. J. Walton	12-54-0
	NEGATIVE NUMBER 12-55-0 DELETED.			
12-14	Regulator power supply - 300V.	Cosmotron LRedmond	R. J. Walton	12-56-0 and 12-57-0
12-14	Corona ~~sprq~~ spray amplifier.	Cosmotr on LRedmond	R. J. Walton	12-58-0
12-14	Injection master control.	Cosmotron LRedmond	R. J. Walton	12-59-0 thru 12-61-0
12-14	Relay panel.	Cosmotron LRedmond	R. J. Walton	12-62-0
12-14	Pre-amplifier power supply.	Cosmotron LRedmond	R. J. Walton	12-63-0
12-14	Corona spray amplifier.	Cosmotron LRedmond	R. J. Walton	12-64-0
12-14	Pre-amplifier power supply.	Cosmotron LReddmond	R. J. Walton	12-65-0
12-14	Four pump master control.	Cosmotron LRedmond	R. J. Walton	12-66-0
12-15	Cloud formation.	Cosmotron GBCollins	R. F. Smith	12-67-0

Date	Caption	Dept.	Photographer	Number
12-19	B-29 cloud chamber equipment (3/4 front view).	ClChamber SKemic	R. F. Smith	12-68-0
12-19	B-29 cloud chamber equipment (rear view).	ClChamber SKemic	R. F. Smith	12-69-0
12-18	Five tradescantia plants from the gamma field.	Biology ASparrow	R. F. Smith	12-70-0
12-18	Six tradescantia plants from the gamma field.	Biology ASparrow	R. F. Smith	12-71-0
12-18	Tradescantia bud cluster.	Biology ASparrow	R. F. Smith	12-72-0
12-18	Tradescantia bud cluster.	Biology ASparrow	R. F. Smith	12-73-0
12-18	Tradescantia plant grown from cutting taken from in the gamma field.	Biology ASparrow	R. F. Smith	12-74-0 and 12-75-0
12-18	Tradescantia cutting taken from plant in the gamma field.	Biology ASparrow	R. F. Smith	12-76-0
12-18	Tradescantia plant showing vegetative formation of leaves and buds.	Biology ASparrow	R. F. Smith	12-77-0
12-18	Tradescantia plant showing abnormal leaf formation.	Biology ASparrow	R. F. Smith	12-78-0
12-20	Schematic of apparatus for controlling gamma emitter. Used in ~~fiead~~ field irradiation of plants.	Biology Christensen	M. H. Bull	12-79-0
12-20	Aerovane Trace. Wind Speed, 10/17/50, 05 to 09.	Metoerology ABelfour	M. H. Bull	12-8000
12-19	Aerovane Trace. Wind Speed, 9/17/50, 04 to 08.	Meteorology ABelfour	P. Simack	12-81-0
12-19	Aerovane Trace. Wind Speed, 10/6/50, 0430 to 0830.	Meteorology ABelfour	P. Simack	12-82-0
12-26	Fluid intake and urine volume for 24 hours after irradiation.	Biology AEdelmann	A. R. Lasky	12-83-0
12-27	The effect of limiting fluid intake after X-irradiation.	Biology AEdelmann	M. H. Bull	12-84-0

Date	Caption	Dept.	Photographer	Number
12-21	Techncian getting ready to place a boiled down sample of evaporated waste into lead pig for counting. In foreground is a similar sample, which has been scraped from container.	HPhysics	R. J. Walton	12-85-0
12-15?	Two views of police car involved in an accident.	Trans. EJBergin	R. J. Walton	12-86-0 and 12-87-0
12-16?	Damage done to Meteorology pole when lightning struck.	Meteorology HBohnhorst	Meteorology	12-88-0 thru 12-93-0
12-27	Urine specific gravity. (concentration test).	Medical LFarr	H. Maile	12-94-0
12-27	Percent dose retained. 96 hours.	Medical LFarr	H. Maile	12-95-0
12-27	Urea clearance per cent average normal.	Medical LFarr	H. Maile	12-96-0
2-27	Trebler Sampler.	HPhysics LGemmell	H. Maile	12-97-0
12-27	Trebler Sampler Setting.2	HPhysics LGemmell	H. Maile	12-98-0
12-27	Longitudinal Section Through Tank.	HPhysics LGemmell	H. Maile	12-99-0
12-22	Dr. G. K. Greene at testing controls.	Cosmotron GKGreene	R. J. Walton	12-100-0
12-22	Dr. G. K. Greene testing first quadrant.	Cosmotron GKGreene	R. J. Walton	12-101-0
12-22	Testing first quadrant.	Cosmotron GKGreene	R. J. Walton	12-102-0
12-22	Group of men celebrating during testing of first Cosmotron quadrant.	Cosmotron	J. F. Garfield	12-103-0 and 12-104-0
12-22	Various views of the magnet sections during testing operation.	Cosmotron	J. F. Garfield	12-105-0 thru 12-111-0

Date	Caption	Dept.	Photographer	Number
12-13	Slide No. A-2269-F 272	Biology Sparrow	R.F. Smith	12-112-0
12-28	Slide No. A-2269-F (B) 273	Sparrow	R.F. Smith	12-113-0
12 30	P[illegible] for [illegible] magnet [illegible]	Br[illegible]	M[illegible]	[illegible]
12 30	R[illegible] "	"	"	12-115-[illegible]

Date	Caption	Dept.	Photographer	Number
6-9	Figure 2 - Neutron Deuteron Scattering at 5.5 Mev.	Physics EWantuch	H. Maile	6-54-0
6-9	Figure 1 - Neutron Deuteron Scattering at 4.5 Mev.	Physics EWantuch	P. Simack	6-55-0
6-9	Adsorption of Tracess in Five-Foot Column.	Geology deLaguna	R. Simack	6-56-0
6-9	Close-up of coils on winding rack.	Cosmo JKosh	R. F. Smith	6-57-0
6-9	End view of coils on winding rack.	Cosmo JKosh	R. F. Smith	6-58-0
6-9	3/4 view of end of coils on winding rack.	Cosmo JKosh	R. F. Smith	6-59-0
6-9	Section of coils on winding rack.	Cosmo JKosh	R. F. Smith	6-60-0
6-9	Front view of magnet sections.	Cosmo JKosh	R. F. Smith	6-61-0
6-9	End view of magnet sections showing coils and insulation.	Cosmo JKosh	R. F. Smith	6-62-0
6-9	View from top of magnet showing insulation.	Cosmo JKosh	R. F. Smith	6p63-0
6-9	Close-up of end of magnet sections showing coils/	Cosmo JKosh	R. F. Smith	6-64-0
6-9	3/4 view of end of magnet sections.	Cosmo JKosh	R. F. Smith	6-65-0
6-9	Figure 1 - RF ion speed gauge assembly.	VandeGraaff EHafner	H. Maile	6-66-0
6-9	Typical results of a single calibration run - Figure 4.	VandeGraaff EHafner	H. Maile	6-67-0
6-9	Figure 2 - The total neutron cross section of aluminum as a function of neutron energy.	VandeGraaff EHafner	H. Maile	6-68-0
6-9	Figure 2 - Totla cross section of oxygen as a function of neutron energy.	VandeGraaff EHafner	H. Maile	6-69-0
6-9	Figure 2 - Alpha-spectrum and proton spectrum from Be^9 bombarded by 600-kev. deuterons.	VandeGraaff EHafner	H. Maile	6-70-0

Date	Caption	Dept.	Photographer	Number
6-9	Figure 5 - Absolute Voltage Determination.	VandeGraaff EHafner	H. Maile	6-71-0
~~60-9~~ 6-9	Figure 6 - Gamma-ray yield curves for both series of Al (pgamma) resonance reaction.	VandeGraaff EHafner	H. Maile	6-72-0
6-9	Figure 1 - Energy of neutrons from Li^7 (P,n) Be^7. q	VandeGraaff EHafner	H. Maile	6-73-0
6-9	Figure 3 - Proton groups from Li^6 (dp) Li^7, together with alpha-particles from Polonium.	VandeGraaff EHafner	H. Maile	6-74-0
6-9	Figure 1 - Spectrometer Assembly.	EHafner	H. Maile	6-75-0
6-12	Graph: Potentiometer reading: volts.	VandeGraaff EHafner	H. Maile	6-76-0
6-12	Li^7 (p,n) Be^7, 11 May 1950.	VandeGraaff EHafner	P. Simack	6-77-0
6-12	Section of bar for Cosmotron coil.	Cosmo JKosh	R. J. Walton	6-78-0
6-12	End view of coil winding on fabrication stnad.	Cosmo JKosh	R. J. Walton	6-79-0
6-12	Close-up of copper bar joint 2 for coil.	Cosmo JKosh	R. J. Walton	6-80-0 thru 6-82-0
6-12 6-12	Composite of: 1. Butane-d - 12/17/49. 2. Butane - 6/23/48.	Chemistry Thompson	H. Maile	6-83-0
6-12	Compostie of: 1. Deutero Ethane-Deatero Ethylene mixture; Fischer-Tropsch Synthesis 1/17/49. 2. Deutero-Ethane; Fischer-Tropsch Synthesis - 1/19/49 3. Ethane - 2/28/49.	Chemistry Thompson	H. Maile	6-84-0
6-12	Composite of: 1. Hydrocarbon; Liquid; Hydrogenated; 7/20/48 2. Infra-red spectrum of hydrocarbom liquid product - 6/18/48/	Chemistry Thompson	H. Maile	6-85-0

Date	Caption	Dept.	Photographer	Number
6-12	Composite of: 1. Deutero Propane-Deutero-Propylene mixture - 1/13/49 2. Propane-d - 12/17/49 3. Propane.	Chemsitry Thompson	H. Maile	6-86-0
6-12	Composite of: 1. Infra-red spectrum of Deutero Methane - 11/18/48 2. Infra-red spectrum of Methane C.P. 6/18/48.	Chemistry Thompson	H. Maile	6-87-0
6-12	Composite of: 1. Deutero Carbon Liquid - 11/17/48 2. Stabilized Deutero Carbon Liquid - 1/6/50 3. Deuterated Stabilized Deutero Carbon Liquid - 1/13/50.	Chemistry Thompson	H. Maile	6-88-0
6-12	Schematic of Power Supply for Recording Scaler.	Electron. O'Neill	H. Maile	6-89-0
6-12	Schematic of Recording Scaler.	O'Neill	H. Maile	6-90-0
6-9	Apparatus at the College of Physicians And Surgeons.	Columbia GFailla	Garfield & Walton	6-91-0 thru 6-100-0
6-8	Various views of different parts of the site from the Meteorology tower.	Met. MSmith	J. F. Garfield	6-101-0 thru 6-116-0
6-13	Days after X-Irradiated vs. Per cent survived.	Biology Edelmann	P. Simack	6-117-0
6-12	Overall view of magnet testing block.	Cosmo WMoore	R. J. Walton	6-118-0 ✓
6-8	Lucite radiation chamber - 3/4 top view.	Biology Sparrow	R. F. Smith	6-119-0
6-8	Lucite radiation chamber for radiating plants. General view breakdown.	Biology Sparrow	R. F. Smith	6-120-0
6-8	Lucite radiation chamber for plants. Close-up of radiation discs and motor for rotating plant.	Biology Sparrow	R. F. Smith	6-121-0
6-8	Lucite radiation chamber showing how plant is placed in radiation compartment.	Biology Sparrow	R. F. Smith	6-122-0

Date	Caption	Dept.	Photographer	Number
6-8	Placing specimen to be radiatéd in slide of lucite radiation chamber.	Biology ASparrow	R. F. Smith	6-123-0
6-7	Tradescantia plants in radiation field. View looking southeast.	Biology ASparrow	R. F. Smith	6-124-0 thru 6-126-0
6-7	Tradescantia plants in radiation field. View looking east.	Biology ASparrow	R. F. Smith	6-127-0
6-7	Tradescantia plants in radiation field. View looking west.	Biology ASparrow	R. F. Smith	6-128-0
6-8	Dr. A. O. Allen, chemist at BNL adjusts the target rod ön the lab's small chemistry Van de Graaff generator. Inside the tiny glass flask taped to the rod, just above Dr. Allen's left' hand, is a chemical compound to be bombarded by high energy electrons, or X-rays, from the generator., a two million electron volt "atomic rifle". When the flask is fastened in position it is enclosed by the massive lead shield shown in the picture. The shield lessens the amount of radiation escaping into the room. Scientists remain outside the room while the machine is running.	Chemistry	R. F. Smith	6-129-0
6-8	Injecting a chemical compound into a small flask, the end of which will be sealed off before bombardment by high energy electrons from the chemistry Van de Graaff generator at BNL. After bombardment, the flask is inserted in a glass apparatus so that products formed by irradåation of the compound may be separated, identified and analyzed.q	Chemistry	R. F. Smith	6-130-0
6-8	A small glass flask, containing a chemical compound bombarded by electrons, has been placed inside a glass tube as part of an experiment at BNL. In the next step, the contents of the flask will be frozen. The freezing breaks the glass so that the substance and products of irradiation are released for analysis in the larger glass apparatus.	Chemistry	R. F. Smith	6-131-0